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## ALBERTA AGRICULTURE AND FOOD TRADE: RECENT TRENDS

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## Executive Summary

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To bring Alberta's and Canada's agriculture sector back to a prosperous, productive, growing situation, capable of making strong contributions to the rural economy and providing a basis for long term viability and expansion means that provincial and federal governments have to revise their agriculture policy orientation and once again make agriculture a priority for policy attention. Overall reorientation to agriculture policy reform in Canada that focuses on sustained international competitiveness is required at the provincial and federal orders. Frequent and periodic tinkering will continue to put Canadian and Albertan products at a disadvantage in relation to their competitors. To facilitate this reorientation, major changes in policy associated with industry competitiveness, research and development, trade access enhancement and agricultural structural and reform will be required.

### Industry Competitiveness

- Industry and Government should undertake all measures available to improve competitiveness.
- Industry and Government should expand efforts to attract foreign direct investment to the agriculture sector to facilitate expansion of value added food processing and improvements in primary and processing research and development.
- Government should provide a number of facilitative services, related to finance, insurance, customer relations, and transportation, to help small and medium sized niche operations.
- Coping with U.S. and various other country of origin labeling requirements should include a strategy to look at long-term marketing opportunities by branding and product differentiation in foreign markets.
- Industry and Governments should increase the extent of adding value in both primary production through animal genomics, quality, tracking and tracing, organic ranching, and in meat processing through packaged and ready foods, food safety protocols and product differentiation.
- Industry and Governments should develop pork markets in Asia and Mexico. Structural marketing trends and consumer preferences will require the maintenance and enhancement of quality, food safety, tracking and tracing to ensure growth of these markets.

### Research and Development

- Industry and Governments should aggressively pursue specialty market innovations with additional focused research and development.
- Government should enhance public investment in crop yield research, given the restricted resource base for wheat production.

- Further expansion of government, industry and public institution resources devoted to research and development in the primary agriculture and food processing sectors should be a priority.

### **Trade Access Enhancement and International Marketing**

- Canada should make dramatic adjustments to its trade negotiation approach in the World Trade Organization Doha Round of negotiations and bilateral and regional free trade negotiations by refocusing initiatives on expanding market access to improve opportunity for the vast majority of Canadian and Alberta agricultural production, which depends on market access and international market prices.
- Rather than a negotiating approach that focuses on trying to maintain import protection to supply managed products, serious consideration should be given to amending supply management in Canada. Compensation, in the context of a changed trade negotiating approach, one that focuses on agriculture trade liberalization and that eliminates or reduces Canadian agriculture protectionism, should be considered to allow structural adjustment in the supply managed sector to occur.
- The proposed changes on tariffs and trade, contained in the Doha Round negotiations, would improve market access for both the livestock and crops sectors.
- Greater discipline on Canadian domestic agriculture support programs would help induce some structural and technological innovations in production and trade to enhance competitiveness of Alberta and Canadian exports.
- Stronger collaboration between Canadian industry and national organizations, and their U.S. and international counterparts, should be encouraged.
- Alberta should once again make agriculture trade policy a priority for Government attention, aggressively pursuing agriculture trade liberalization as negotiating priorities for federal negotiations. More active participation and pressure to achieve those objectives is necessary.
- Industry and Government should expand international marketing initiatives including domestic awareness and marketing education and assistance with trade promotion activities.

### **Canadian Agriculture Structural Adjustment and Reform**

- Given that the Canadian Wheat Board export monopoly would be eliminated following the successful completion of the Doha Round, it is important that the capital and marketing structure of a privatized CWB be urgently addressed.
- Expanding the roles of multi-national and domestic private grain companies should be considered.

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## Introduction

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Exports have been an integral and essential feature of the agriculture and food industry in Alberta. This is a product of the province's relatively low population and consumption base on the demand side juxtaposed with a large resource base of prime agriculture land for crop production and an abundance of range and pasture for grazing and forage for raising livestock on the supply side. A host of factors influence the disposition of surplus production or exports including global supply/demand balances, relative cost/price relations, structural changes through farm consolidation and scale economies, market access, exchange rates, sanitary and phyto-sanitary standards and regulations, disease and pest related issues. The inherent nature of agriculture means the industry is influenced by weather, animal and plant disease, and price and cost variations between commodities. These factors, in turn, affect the composition of the export trade. The U.S. has become Alberta and Canada's most important agricultural trading partner because of the extensive shared border, the large and developed market in the U.S., traditional trading relations built over time, similar consumption patterns, language and culture, and the complementary production and demand base. However, the growth of trade relations with Asia in particular, and globalization in general, have allowed for a degree of diversification in the flow of agricultural trade.

In the 1980s and 1990s, the Alberta Government, with the leadership of the Department of Agriculture, recognized the critical importance of exports to growth of the province's agriculture and food industry. Indeed, the government set a target of a production base of \$10 billion for primary production and a \$20 billion food manufacturing industry by 2010, premised on the basis of export opportunities emerging along the U.S. Eastern Seaboard, in California, in East Asia (particularly China, Japan, Korea), and in the then Soviet Union. Alberta farm cash receipts topped \$10 billion in 2008 but the food manufacturing sector shipments, at \$11.7 billion, still remain well below target. Clearly the spurt to over \$10 billion in farm cash receipts in 2008 was influenced by price spikes for grains and oilseeds as a result of what has been described as a speculative bubble and as well as by massive increases in Government program payments. Though it is unlikely that this target can be sustained in 2009 with the sharp decline in commodity prices, it is a landmark from which to review the performance over the past decade and explore prospects over the next several years.

This paper examines trends in production and trade and the various factors that have affected this trade of both primary agriculture products and their manufacture in Alberta. The paper also proposes policy and program measures that could foster a more robust performance of this trade.

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## Primary Sector: Production Trends

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The primary resource for agriculture operations, namely land that can be cultivated or used for grazing or production of hay, has remained fairly stable at between 51-52 million acres over the past two decades. Of this amount, approximately 45% has been planted in crops. The decline in summer fallow land from over five million acres in 1986 to just over two million in 2006 has been the main source for increased land under crops. Markets, weather and moisture patterns are the main determinants of production acreage of different crops. Irrigation of 1.3 million acres in Southern Alberta represented just under 6% of the 23.8 million acres of land under crops in 2006 and provides for a wide range of forages, cereals and specialty crops. Until about the mid 1980s, agricultural production in Alberta was generally divided evenly between crops and livestock, each fluctuating between 45-50 % of market receipts. Since then the share of the crop sector as a percentage of total market receipts has steadily declined, while that of the livestock sector has increased significantly.

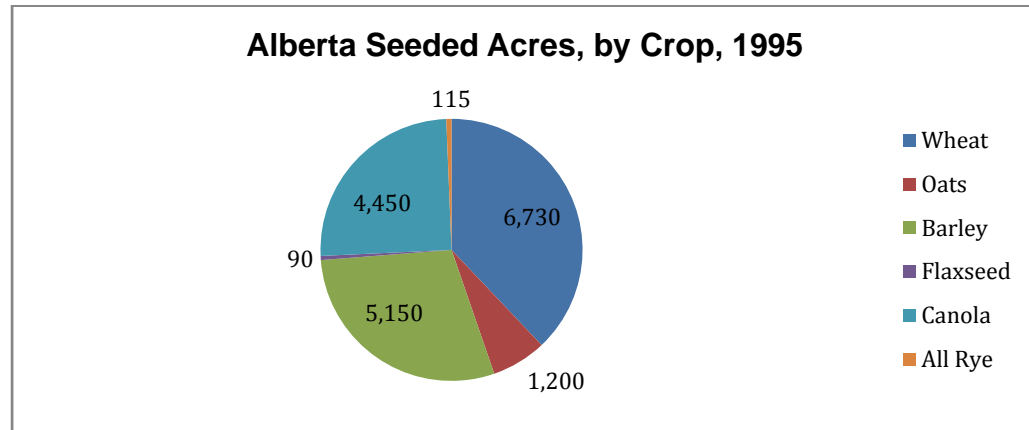
These trends are explained by a number of factors including major policy decisions, the catastrophic *Bovine spongiform encephalopathy* (BSE) outbreak in the cattle sector in 2003-04, and more recently the price spike in 2007-08 for grains and oilseeds. Following years of agitation by a large segment of Prairie farmers and ranchers, the Western Grain Transportation Act (WGTA) was amended in 1995, eliminating the transportation subsidy for grain exports from Western Canada. As expected, this led to significant expansion of cattle feeding in Western Canada, especially in Alberta. The province also had the advantage of an abundance of range land that supported the cow calf sector. The outbreak of BSE, however, devastated the beef sector and led to drastically reduced market receipts for livestock and its products. Hog production has maintained a steady level in Alberta, though recently it has operated at a slightly higher level.

### Crop Production

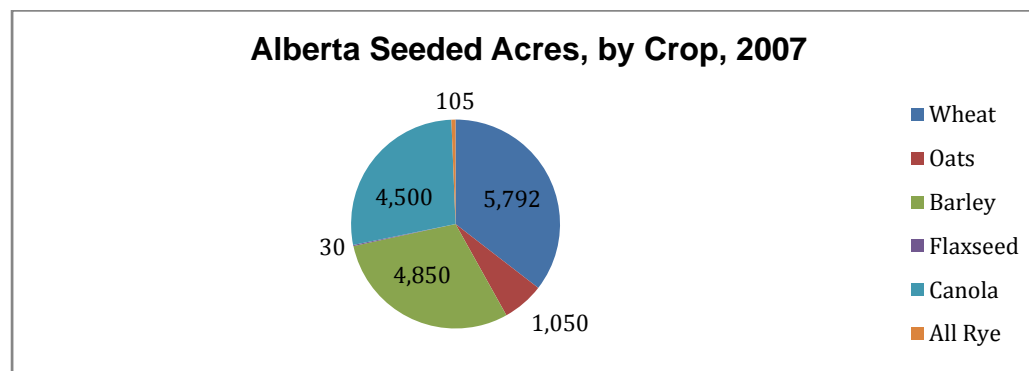
Seeded acreage of Alberta's two principal crops, wheat and barley, has varied between 6 to 8 million acres and 4.4 to 5.5 million acres, respectively. As in most agriculture crop production decisions, weather and price expectations are the main drivers of these variations. On a long term trend basis, wheat acreage increased in the 1980s and early 1990s but has generally fallen from 7.5 million acres to 6.5 million acres. Given the notorious variations in yields because of variable weather on the Prairies, production of these crops fluctuates considerably. However, there have been few technological breakthroughs affecting production yields in both crops relative to, for example, corn in the U.S. (genetically modified or GMO) or rice in Asia (the dwarf variety following the green revolution). The lack of technological progress in wheat and barley production has serious consequences for competitiveness and the growth of livestock production in Alberta. It is recognized that, because of climatic and geographic conditions, the U.S. has a degree of competitive advantage over Alberta in livestock production. Alberta's disadvantage relative to the U.S. is only expected to increase with the rapid growth in corn yields and acreage as a result of the demand for corn, based on the subsidized production of ethanol, the



availability of dried distillers grains, and its feed uses in the mid-west livestock producing region. Production of other traditional crops in Alberta, e.g. oats, rye, flax seed etc, has not shown any marked changes. However, demand for specialty crops for health and nutrition purposes has been increasing with supply being subject to relative costs and prices.



Source: Alberta Agriculture, Food and Rural Development Statistics Yearbook (various issues).



Source: Alberta Agriculture, Food and Rural Development Statistics Yearbook (various issues).

Production of other, relatively non-traditional commodities, however, has allowed some degree of crop diversification in Alberta. Within the crops sector, the Alberta industry has diversified production considerably over the past two to three decades and, to a certain extent, this diversification has occurred in spurts. The most significant event was the increasing adoption of the 'Cinderella' crop with the scientific breakthrough of low erucic acid variety of rapeseed, branded canola, in 1974. Production increased even more rapidly when the U.S., following years of political pressure, litigation and negotiations, granted GRAS (generally regarded as safe) status to canola in 1985. Alberta, with its climate and crop rotation practices, is well suited to the disease free quality production of canola relative to most other producers. Acreage under canola rose from less than a million in the 1960s to between 2.5 and 3 million acres. Since the 1990s it has ranged between 3 to 5 million acres, depending on the crop rotation, price expectations and weather.

Another element of diversification within the crops sector has been the growth in production of 'specialty crops' on irrigated acreage in Southern Alberta, in particular dry

peas and potatoes. Farm cash receipts from potatoes increased from about \$20 million prior to the early 1980s to over \$150 million in recent years while farm cash receipts from dry peas increased from less than \$10 million prior to 1990 to \$100 million in 2007. Production of chick peas, mustard, lentils, grass seed, etc. has been important, and is likely to become increasingly so with the growth of markets for these products and emerging consumer preferences in general.

## **Livestock Production**

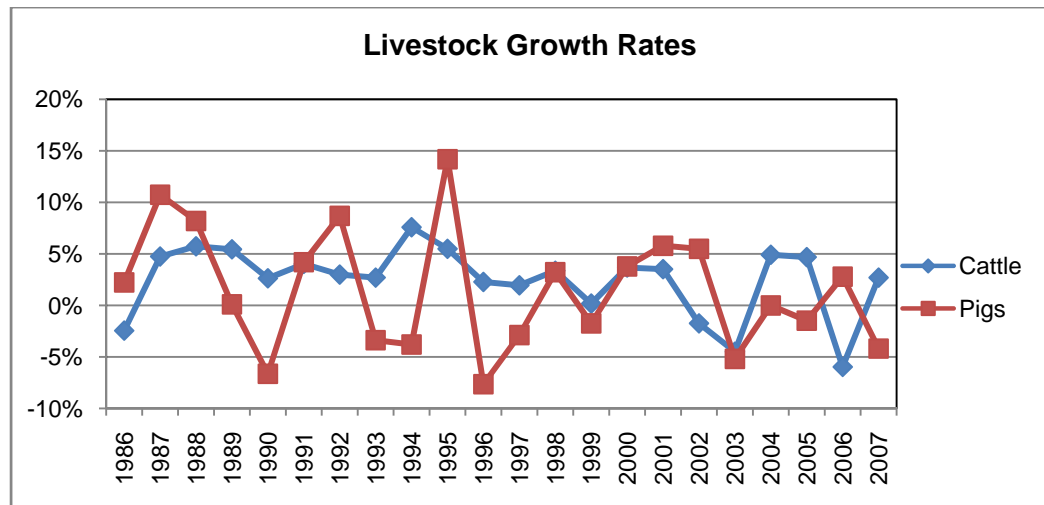
In the livestock sector, production of cattle and hogs on Alberta farms has been influenced by several factors including: availability of grazing land and forage, feed grains, processing capacity, catastrophic events in the form of disease outbreaks, weather including drought, and broad policy measures including domestic income support programs, trade and transportation policy. The large and growing market for the live animals and meat in the U.S. has clearly been an important factor on the demand side in the growth of livestock production in Alberta.

The number of cattle and calves on Alberta farms rose steadily during the 1980s, but increased more sharply in the 1990s. With the legislation to scrap the WGTA and the elimination of the grain export subsidy, grain pricing became more competitive, essentially reducing the cost of inputs to the livestock industry. The Canada-U.S. Free Trade Agreement (FTA), which eliminated customs duties for cattle and beef, was another important positive factor. The U.S., for all practical purposes, was the only market for commercial live animals as well as the traditional market for Canadian beef. These factors contributed to increase Alberta's share of the Canadian market from 30% or less to currently over 40%. The dairy sector supplemented the Alberta beef industry. However, milk cows and dairy heifer numbers are constrained by the quota system under supply management. Indeed, the rapid growth in dairy productivity has led to significant and rapid decline in milk cow numbers, and hence the dairy industry contribution to the beef industry.

Hog production and processing comprise Alberta's second largest livestock industry. Production was more or less stable in the 1980s. Hog numbers increased from 1.3 million head in 1980 to just over 2 million in 1995. Since 2000, there has been a significant expansion in the slaughter of Alberta-origin hogs, rising from 1.7 million head in 1998 to 3.7 in 2006 and 3.4 million in 2007. Alberta's share of the national market was well over 20% in the 1960s and 1970s but has remained well below that level in the past several years, standing at just over 13% in the mid 1990s. There has been a slight increase in Alberta's exports of live hogs to the U.S. market. However, considering the effect of Federal policy changes in grain transportation and the resulting expansion of the cattle and beef industry in Alberta, as well as the expansion of the Manitoba hog industry, the relatively muted response by the hog and pork industry in Alberta has been surprising. Significant structural changes, including specialization and large scale hog production on the one hand, and the reduced number of processing plants with significantly higher capacity in Western Canada on the other hand, have changed the industry over the past ten years.

The production of poultry, dairy and eggs is constrained by the supply management system but nonetheless impressive gains have been made. Price management added to the gains in dollar values. Farm cash receipts for these commodities, with a few exceptional

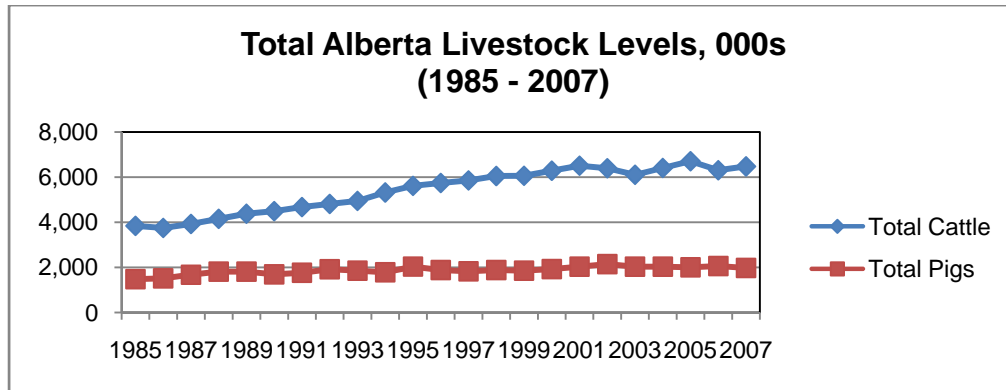
years, have increased steadily from \$350 million in 1986 to \$651 million in 2007. Dairy is by far the most significant segment, accounting for \$223 million in 1986 and \$426 million under supply management in 2007. Production of poultry meat has increased steadily from 63.7 thousand tonnes in 1996 to 89.6 thousand tonnes in 2007 or 40%. The value of poultry production increased by 50% over the same period. Production and receipts for eggs show similar increases. Supply managed products in Alberta account for a decreasing share of farm cash or market receipts; between 1986 and 2007 their share declined from 9.3% to 7.5% of total farm cash receipts. It should be noted that, while supply managed products benefit much less than other products from government payment programs, which are based on price and production variations of individual farmers, both production and price are set by regulation for supply managed products.



Source: Alberta Agriculture, Food and Rural Development Statistics Yearbook (various issues).



Source: Alberta Agriculture, Food and Rural Development Statistics Yearbook (various issues).



Source: *Alberta Agriculture, Food and Rural Development Statistics Yearbook (various issues)*.

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## The Agriculture and Food Manufacturing Sector

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Given the geography and climatic conditions, Alberta's agriculture has a well diversified production structure based on crops and livestock relative to its sister Prairie provinces, Saskatchewan and Manitoba (and, for that matter, the U.S. states along the 49th parallel). Apart from the relative income stability this brings to the industry, the diversified production base is conducive to a wide range of agriculture and food manufacturing activity. The principal drawbacks have been the limited consumption/population base, its dispersion across the province, and the high transportation costs to enter the larger consumer markets in Eastern Canada.

The Government of Alberta and its Department of Agriculture recognized infrastructural deficiencies as one of the serious obstacles to exploit opportunities for adding value in the Province as a whole, and the agriculture sector in particular. The long term vision of the political and bureaucratic leadership in the 1970s and 1980s laid the foundation for the growth of food manufacturing in the province by adopting investment strategies and policy positions to meet the challenge. Relatively large public sector investment in transportation infrastructure, water and waste water treatment, power, financial facilities, (for example, the setting up of the Alberta Financial Services Corporation, encouragement of private western banking operations, and treasury branches) and financial assistance in several instances, were among the various measures undertaken. Research and product development to assist manufacturing activity was encouraged by financial support to industry organizations by establishing and then expanding the Food Processing Development Centre in Leduc (including the incubator program). Marketing assistance (e.g. creation of the Alberta Export Agency) and trade policy (establishment of a Trade Policy Secretariat in the Department of Agriculture) received strong political support and were high priority considerations within Departmental planning and operational practices. Intensive cooperation between Government and industry, as well as between primary and processing branches of the industry, laid the foundation for the growth of the sector in the 1980s and early 1990s.

These initiatives also brought into sharp focus conflicts between the Federal and the Provincial Governments, the two most outstanding being the monopoly of the Canadian

Wheat Board (CWB) and the aforementioned WGTA, which provided incentives to export of grains from Western Canada and reduced the competitiveness of livestock production in Alberta. The Loughheed Government (1971-1985) also began an aggressive approach of provincial participation in international trade negotiations and asserting the province's jurisdiction over natural resources. These policy initiatives vitiated Federal Provincial relations over several years (the CWB has yet to be resolved) and have had significant impact on Alberta's international trade.

### **Food and Beverage Industry**

The food and beverage industry is the third largest manufacturing sector in Alberta. Its shipments doubled from \$5.5 billion in 1993-94 (average of calendar years) to \$10.1 billion in 2006-2007, and sales were set at a record high of \$11.7 billion in 2008 (estimate). Its share of total provincial manufacturing shipments declined from 24% to 15.4% over the same period as the value of energy and related industry shipments soared.

The main components of the food manufacturing industry are (estimates are for 2008):

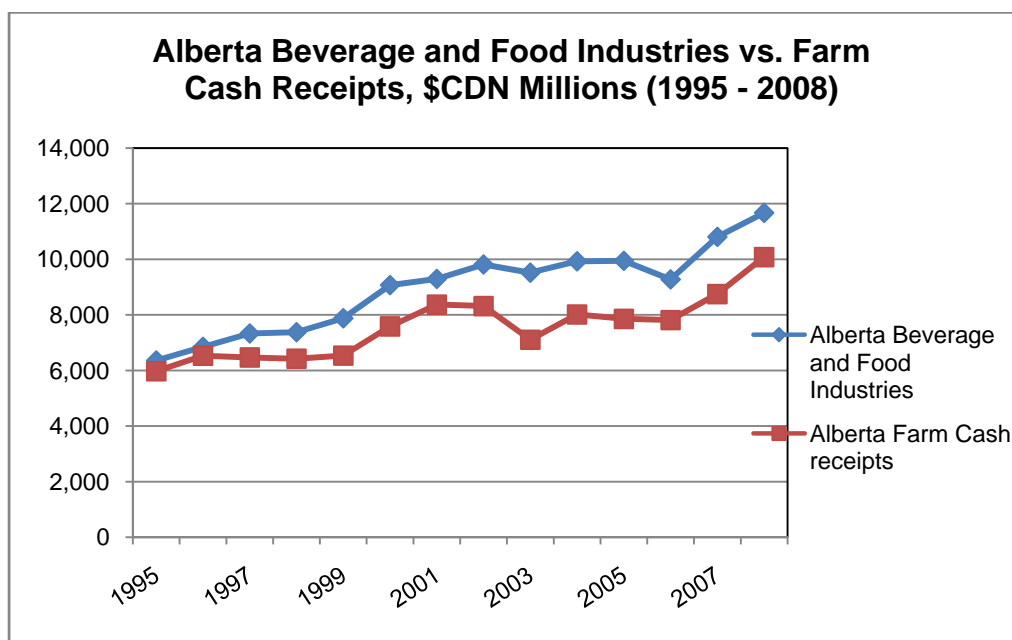
- meat slaughtering and processing: \$5.4 billion or about 50% of all food shipments in 2007; estimated \$5.6 billion;
- grain and oilseed milling and processing: estimated at \$900 million to \$1 billion;
- dairy product manufacturing: \$1.3 billion
- animal feed: \$600 million;
- fruit and vegetable processing: \$280 million;
- bakeries etc: \$290-300 million.

Sugar, confectionary and snack foods are also important, but are of considerably lower value.

The number for food manufacturing establishments has grown steadily from 382 in 1999 to 885 as of June 2008. However, in 2008, the bulk of these establishments are micro and small operations (five to 99 employees). There were 36 medium sized operations (100-499 employees) and just four large firms (500 or more employees). Comparatively, New Brunswick had 36 medium sized and three large establishments, while Newfoundland with 38 medium and four large establishments. It is likely that fisheries play a very significant role in these eastern provinces. Nonetheless, it raises the question of why the size, value and rate of growth of food processing in Alberta, with its relatively diversified agriculture base, are so much lower.

Capital investment expenditures in the food manufacturing industry have steadily increased since 1990, at between \$170 million to \$200 million per year. On average, however they have declined since 2000 from \$171 million to \$158 million per year. Indeed no large or significant capital expenditures have occurred since investments by multinationals in the meat packing and potato processing industries despite earlier attempts at luring multinationals into the Alberta food processing sector. A handful of companies dominate the food processing industry in Alberta -- Tyson, Cargill, Lakeside, XL Beef, Olymel, Saputo, ConAgra, Maple Leaf, ADM, and Agricore United to name the largest.

The above big picture description of the Alberta agriculture and food industry and trends in primary and processing segments give a valuable insight into the export performance of the agriculture and food industry.



Source: Alberta Agriculture, Food and Rural Development Statistics Yearbook (various issues).

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## Alberta Agriculture and Food Exports

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Exports are a very important component of the Alberta agriculture and food industry. The ratio of exports to farm market receipts, a rough indicator of this importance, rose from 59% in 1990-91 to 84% in 2006-07. This is almost double the ratio for Canada as a whole and much higher than in the U.S. or the E.U. More realistically, the ratio of exports of animals and crops to farm market cash receipts in 2007-08 was 50%, and that of exports of value added products (including beverages) to manufacturing sales was 28%. This clearly indicates how critical exports are to the growth and sustainability of the primary – both crops and animal – sector and as well to the agriculture processing industry in Alberta.

Between 1990-91 and 2000-01 exports of agriculture and food products from Alberta grew 15% per annum from, \$2.3 billion to \$5.6 billion; compared to Canada as a whole where exports increased an average of 10% per annum, from \$12.4 billion to \$25.3 billion. Even more impressive was the increase in exports of processed and manufactured food and agriculture products. In the case of Alberta, these increased by an average of almost 40% per annum (\$583 million to \$2.9 billion) compared to the increase for Canada as a whole of 22% (\$4.5 billion to \$14.8 billion). This change in the structure of Alberta exports, from primary products to manufactured goods, has been an important policy objective in expanding the industry, creating jobs, diversifying risk, and adding stability in the sector. It is also reflective of some large multinational company entry into the Alberta economy in the meat packing and potato processing sectors, among others.

Since 2000, however, the growth has been considerably muted. From 2000 to 2007, Alberta's agriculture and food exports increased a mere 10% while Canadian exports increased 18%. Although there have been years when exports did considerably better, the

overall broad trend of muted growth is clearly evident. Recently released data show agri-food exports from Alberta in 2008 rose sharply to \$8.1 billion, an increase of almost 25% over the previous year, the bulk of this increase is due to high grain and oilseed prices. Exports of Alberta processed products during this period were stagnant, while those for Canada increased by 12%. In Alberta, the share of processed products in the total exports of agriculture and food exports increased from 25% in 1990-91 to 51% in 2000-01 and were somewhat reduced to 45% in 2006-07, while for Canada as a whole, the share of processed products were 36% and 58%, declining to 55% for the same periods. Alberta's strong performance in the earlier period is shown by its share of Canada's exports of processed products, which increased from 12.9% in 1990-91 to 19.5% in 2000-01 but declined to 16.9% in 2006-07.

Export trade data are presented in the appendix.

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## **Factors Influencing Agriculture Trade Trends**

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There are several factors that would appear to have affected the relative slowdown in the growth of processed or manufactured food products since the turn of the century. First, though there has been some consolidation, (including that in primary crop and livestock sectors), there has been little expansion in the processing capacity of the livestock industry, by far the largest contributor to processed food exports from Alberta. The U.S. actions to block Canadian cattle and certain beef products from their market following the outbreak of BSE came as a shock, though essential to the disease protocol for ensuring the rules-based trade in the international beef industry. The vulnerability of cattle exports and its concentration on the U.S. market led to strong advocacy for the need of greater processing capacity within the province. Several such proposals, however, failed to materialize primarily because of lack of capital. Investment in cattle processing has been minimal. While cattle slaughter rose in 2004 and 2005 to above pre-BSE levels as cattle inventory, particularly as older cattle were allowed to come to market in accordance with rules related to slaughter of older animals under BSE protocols, it has declined considerably since then. As indicated earlier, beef accounts, on average, for almost 50% of manufactured food products exports from Alberta. Whilst general theory suggests this concentration has its disadvantages, the macro factors surrounding the industry in Alberta tend to offset these.

Individual sectors have clearly been influenced by specific factors affecting them from time to time, such as BSE, affecting the beef trade, GRAS status affecting exports of canola oil, or the presence of disease – or, in some cases allegations, of disease – in potatoes or honey bees, unforeseen trade actions or market developments. In addition to general economic factors affecting global supply and demand balances and broad consumer trends, such as shifts in consumption patterns, that influence global agriculture trade trends, certain specific factors are of significant consequence to the broad spectrum of Alberta agriculture and food exports. Among the more important are market access through the Canada U.S. Free Trade Agreement (FTA) in 1989, the North America Free Trade Agreement (NAFTA) in 1994, and to a lesser extent the Uruguay Round of Trade Negotiations Agreement on Agriculture in 1994. Canadian dollar exchange rates and

Canadian domestic and international agriculture policies have also had an impact on Alberta agriculture trade performance.

### **Domestic and Trade Policy, Market Access, and Trade Agreements**

Alberta's agriculture trade performance has been directly and indirectly influenced by various Federal and Provincial agriculture policies. The distinct division between the domestic oriented supply managed sector and the free market oriented grains, oilseeds and red meats sectors have clearly influenced Alberta's export performance both directly and indirectly. Canada's farm income support policies, which are the dominant agriculture policy influence in Western Canada (and indeed are the central theme in all Canadian agriculture policy development), have generally been neutral to decisions of the production for specific products. They are generally compliant with the discipline of the Agreement on Agriculture of the WTO, the so called 'green box' category of minimally distortive support programs. Supplementary variations by provincial governments have led to trade actions by the U.S. in some instances. Clearly the system is less distortive than agriculture support systems of the U.S. or E.U. (until recently), but nonetheless these policies have affected the competitiveness and, therefore, export performance of the sector as a whole. Provincial support policies have generally supplemented Federal funds but on occasion have been more specific in terms of commodities or sectors. Again, some provincial support programs have been 'generous' to say the least. These 'income support' subsidies, which were justified from a social policy perspective (as in the recent reform agenda of E.U. agriculture), have reduced the inducement to even greater structural adjustment essential to global competitiveness. It could also be argued that these income support subsidies have dampened the magnitude of innovation, and research and development, which could have been induced by normal market forces within the industry as demonstrated in competing countries such as Australia or emerging agricultural exporters such as Brazil, Argentina, etc.

Reform of 'agriculture policy' in Canada over the past two or more decades has been predominantly in terms of 'risk management,' that is, subsidizing or supplementing incomes of agricultural producers. The background to the "Agriculture Policy Framework (APF)" of 2003 was the first serious attempt to move the sector towards long term competitiveness, with emphasis on science and innovation, food safety and quality, the environment, and extension programs for renewal of the industry through education and adaptation to change. In practice, the background was essentially discarded -- the main thrust and the vast bulk of resources ended up in the so called 'Business Risk Management' chapter, largely devoted to income support. The current suite of support payments in Canada, under the "Growing Forward" agriculture reform policy, the successor to the APF starting in 2009, appears to be an amalgam of the payment system under the two previous five year policies. Despite attempts to rein in these subsidies to within set limits over the reform period, they have continued to vary between a low of \$3.4 billion in 2002 to a high of \$ 4.9 billion in 2005. They are riddled with ad hoc payments by both orders of Government under various justifications. Indeed, Canadian Agriculture policy essentially constitutes the so called "Risk Management" (income support) component, with lip service to long term competitive needs. In Alberta total market receipts averaged \$6.17 billion in 1995-1999, and \$7.8 billion in 2004-2008; direct program payments averaged \$200 million



and \$1.1 billion respectively; and direct payments as a percentage of market receipts rose from 3.25% to 14.1%. Considering net returns in most farming operations, these levels of Government support of farm income clearly have a significant impact on farming decisions and production methods.

As observed by the OECD, "Canada is almost unique in having backtracked since the late 1990's: the percentage of PSE [producer Subsidy Equivalent – the level of government overall support to production, both directly and indirectly] rose from a low of 14% in 1997 to 23% in 2006 before world prices led to a decline of percentage of PSE to 18% in 2007." In the long run these supports have been to the disadvantage of Canadian agriculture export competitiveness and growth.

Canadian agriculture policy of supply management in dairy, poultry and eggs has constricted competition and growth of exports in these commodities but even more consequently in high value added and packaged food industry. These products have been among the highest growth products in world agriculture and food trade and are likely to maintain these trends given demand conditions for such products in both emerging markets and developed countries.

With the global decline of state trading in general, the export monopoly of the Canadian Wheat Board has not been conducive to competitive production and marketing of Alberta grain. The tinkering, rather than a substantive approach to agricultural policy reform in Canada (both provincially and federally), has put Alberta and Canadian exports at a disadvantage relative to those of some major competitors.

Trade policy is clearly an overarching factor influencing the Canadian economy in general, but it is of even greater consequence in affecting specific sectors to the extent that sector specific policies diverge from the application of, to the general approach to, trade liberalization. Globally, trade in agriculture and food has traditionally tended to be constrained by considerations beyond economic factors, the most commonly maintained being the need to be self sufficient in basic foods, to sustain the rural sector of society, its political sensitivity, etc. Agriculture remained outside the GATT discipline until in the 1970s, when it was peripherally drawn into the Tokyo Round of Trade Negotiations. Since then, it has been increasingly drawn kicking and screaming into the liberalization process. The proposed modalities for reform in domestic support and border measures in the Doha Round of World Trade Organization trade negotiations, if implemented, would remedy the bulk of the deficiencies in Canadian production and trade policy for agriculture and food. Reported attempts to scupper this process in the summer of 2009, unfortunately, do appear to be underway, to the detriment of Canadian agricultural export prospects.

Canada has by no means been an exception to the protectionism extended to agriculture; indeed, Canada has been a reluctant partner in the institutional drive, whether multilateral or bilateral, towards a liberal agriculture trade regime. This is clearly contradictory to the interests of the vast majority of the export oriented Canadian agriculture and food industry and demonstrates the clout of protectionist-oriented interests and their political influence in national policy making. This also demonstrates the marginalization of Western Canadian interests in national policy formulation. Given that the federal government has the responsibility to conduct international trade negotiations, the Provincial authorities (under the leadership of the Lougheed government) made determined efforts to influence federal trade policy through a number of initiatives at the political and bureaucratic level, including setting up special units (Alberta Task Force on

Tariffs and Trade ) and Trade Secretariats in some ministries. These initiatives have borne results, particularly as new issues arose in trade negotiations, such as Government Procurement, natural resources, etc. which were substantially under provincial jurisdiction, thus requiring greater provincial participation. Persistent, well-researched and aggressive efforts by the Provinces produced results. Various policy factors will be elaborated below as they relate to Alberta's trade in specific commodities.

Both the FTA and latterly NAFTA provided Canada with considerably improved market access into the U.S. and Mexico through the elimination of tariff and non-tariff barriers. These were significant in some instances, especially for agricultural products with very narrow profit margins or in competition with domestic producers in the U.S. The removal of the quota restrictions for beef and quantitative constraints for grains into the U.S. was of particular benefit to Alberta. Some segments of the agricultural industry were exempted from the liberalization agreement at the behest of the Canadian Government due to short term narrow regional/commodity protectionist interests and this, in turn, led the U.S. negotiators to set out their own exclusions. These exclusions have not been in the longer term interests of Canadian agriculture, and they have become the focus of Canadian multilateral and bilateral agriculture trade negotiations ever since. This preoccupation on exclusions demanded by protectionist interests of Canadian political leaders has constrained Canadian negotiators from realizing benefits that may have otherwise accrued to other segments of the agriculture and food industry in Alberta. Excluding certain agriculture products from trade liberalization in the FTA and NAFTA missed an opportunity to bring these commodities into the 'free enterprise' mode of the rest of agriculture, given that there was ample scope for adjustment timelines and methodologies. Despite shortcomings, these agreements have provided the Alberta agriculture and food export trade with enhanced market opportunities that have been largely exploited. See below for the export performance of certain sectors in markets affected by the agreements.

The General Agreement on Tariffs and Trade (GATT), which was the main institutional focus for global multilateral trade liberalization in the post war period, failed to address agriculture trade issues for a variety of political and economic reasons. The first serious attempt to bring agriculture within the framework of the GATT discipline (which became the World Trade Organization) was undertaken in the Uruguay Round of Trade Negotiations (1986-1994). The Uruguay Round's Agreement on Agriculture (1994) was important to Alberta in that it constituted a first attempt at reducing unfair domestic and export subsidies. Meaningful tariff reductions were not significant, however, to the extent that these were from nominal rates rather than the more effective rates in the most protected markets.

The Uruguay Round was important to Alberta's attempt to diversify its agriculture export markets by constraining subsidized competition particularly into East Asian markets. Export subsidies are the most insidious form of trade distortion and their reduction (for example, by 36% over 5 years for E.U. exports of pork, alfalfa, barley, etc.) was an important step forward. From an Alberta perspective, however, the Uruguay Round was a missed opportunity in that no successful bilateral side agreements could be undertaken, say for beef or pork into Korea, owing to Canada's obsession with protection of the supply managed sectors. Canada's negotiators were constrained in terms of time and priorities set by the Federal Government and by pressure from the presence in Geneva during the final negotiations of large contingents of the supply managed industry. This

position also prevented Canada from taking a leadership role in the liberalization of global agriculture trade and the role was passed onto Australia/New Zealand. Canada's natural leadership role in trade negotiations was lost due to intransigence on protectionism for supply managed products and to a lesser extent the position on state trading entities. The U.S., Australia and others were able to address specific agriculture trade issues affecting their trade in specific markets, which in turn created disadvantages for Alberta and Canadian exporters, for example in the issues of beef grades and shelf life.

This same strategy of safeguarding protected interests continues to haunt the Canadian approach to the Doha Round of world trade negotiations -- the political mandate given to negotiators to retain protection for supply management takes away from their efforts to maximize access for livestock and other products into these markets. The proposed disciplines on domestic and export subsidies in the Doha Round negotiations are considerably greater and more rigorous. For example, the elimination of export subsidies, tiered reduction of production and trade distorting subsidies by as much as 80% for the E.U. and 60-70 % for the U.S. would create a more conducive climate for the competitiveness of Alberta agriculture and food exports. Indeed, some reduction and greater discipline on Canadian domestic agriculture support programs, even within the lowest tier of subsidy discipline, would still induce some structural and technological innovations in production and trade to enhance competitiveness of Alberta and Canadian exports. This has occurred in other countries, such as Australia and New Zealand, who have unilaterally taken steps to provide minimal direct subsidies. The proposed changes on tariffs in agriculture trade would improve market access in particular for livestock products but also for others in the crops sector such as peas, lentils, canola products among others.

## **Exchange Rates**

A second broad spectrum factor has been exchange rates. Exchange rates and their fluctuations affect all trade. However, their effects on agriculture commodities and food manufactures where profit margins, though stable, are generally lower than from manufacturing in general, can be of significant consequence in the short to medium term. Most resource oriented commodity prices are set in terms of the U.S. dollar. The relatively 'low value' of the Canadian dollar versus the U.S. currency, until very recently when resource product prices and energy prices in particular soared, artificially increased the competitiveness of Canadian and Alberta agricultural exports. The real or effective exchange rate of the Canadian dollar with that of the U.S. has been rising gradually, though it remained undervalued until mid-2008.

However, this artificial competitive advantage from long periods of undervaluation has other ramifications. The agriculture industry in Alberta has a large import component of imported inputs. Even more importantly over the long run, the low exchange rate, in not reflecting true purchasing power parity, can act as a disincentive to the growth of productivity – an accusation familiar to the crops sector in particular and Canadian manufacturing in general. An undervalued Canadian dollar has acted as an artificial competitive advantage, but, just as importantly, it has hampered growth in productivity, innovation and other efficiency measures. To the extent that the agricultural industry in Alberta has a large import component (machinery and equipment, chemicals, pesticides, etc.), this artificial advantage is diminished. However, this offset varies for different sectors

or commodities. The probability of a depreciating U.S. currency over the next few years potentially has a double negative effect on Canadian exports of agriculture and food products. It will adversely affect the competitiveness of Canadian products in the U.S. market while at the same time increase the competitiveness of U.S. agriculture in third-world markets.

Currency exchange rates the world over have been experienced fluctuations over the past several years and this will affect the agriculture and food export trade in emerging markets such as China, Korea, Taiwan etc. The exchange rate is beyond the control of the industry or provincial authorities. Under the circumstances, and given the volatile behaviour of currency markets, exporters will have to manage their risk through appropriate hedging mechanisms. Canada has excellent institutional mechanisms in place, such as the Export Development Corporation and commercial banking facilities, to assist with such risk management. Unfortunately small scale exporters, farmers, ranchers and processors may find the process expensive and complicated. The volatility in currency markets, given the magnitude of turmoil in international finance, is unlikely to abate for the short to medium term and small to medium sized agriculture and food exporters may be exposed to the risk of currency variations for quite some time. It would be useful for these producer/exporters to undertake some form or organization to manage their currency risk. A larger role for the provincial financial institutions (such as the AFSC and Treasury branches), given their familiarity with the agriculture and food industry, merits serious and urgent consideration.

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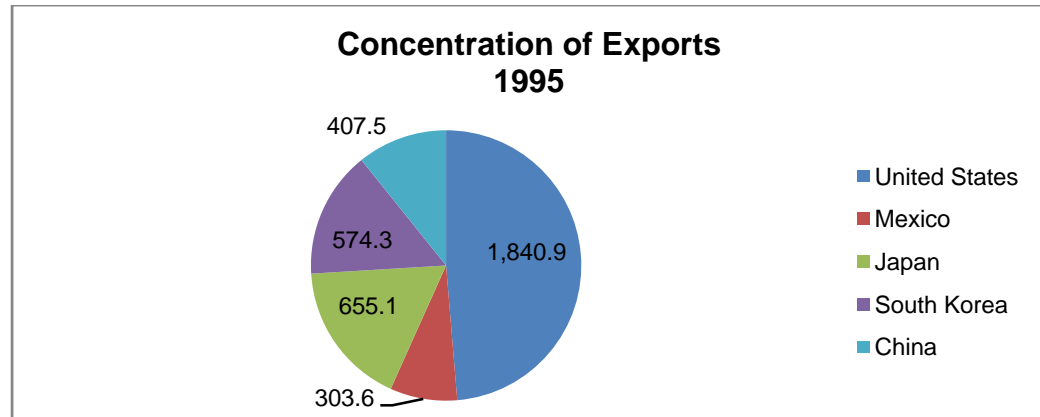
## **Concentration and Direction of Trade**

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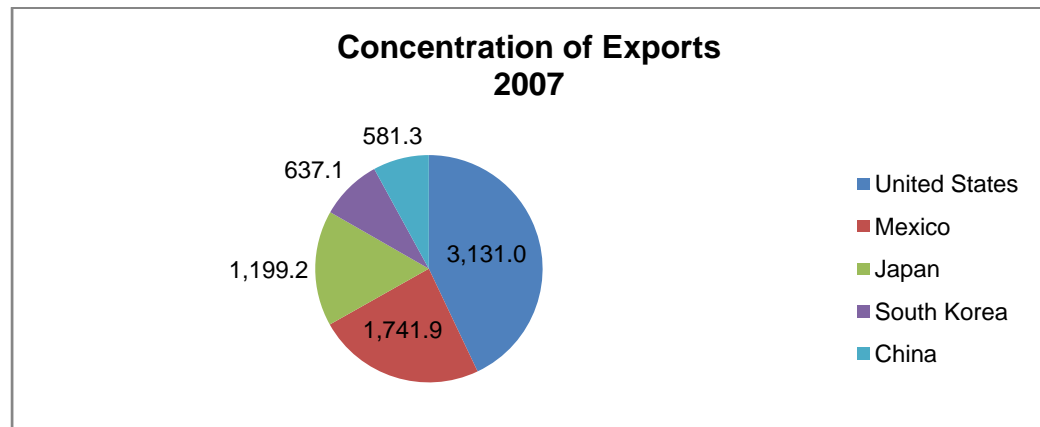
Though the supply of primary commodities and the development of processing have been the main drivers of the composition of Alberta agriculture exports, the markets for this export trade have been an important determinant of performance. Alberta's agriculture exports are dominated by the U.S market, which accounts for over 40% of Alberta exports – having increased from 30 % during the 1980s. This reflects Canada's trade as a whole. To a large extent, this is natural considering geography, complementarities, and cultural factors, not to mention risk aversion of small and medium sized business operators in the agriculture and food industry in Alberta.

This concentration has its advantages and disadvantages. On the one hand, a stable and growing market is preferable to diversified but unstable markets, for example, Indonesia or even, until recently, China, especially for farmers and ranchers who have traded with Americans for several decades. On the other hand, the concentration is vulnerable in that a few products dominate this trade. This became evident in the BSE market disruption (though it can be argued that BSE affected all of Alberta's beef markets) and when the U.S. takes contingency protection or other trade actions, which have sudden and severe impacts on some segments of the industry. The FTA and NAFTA have clearly provided Canada with an added degree of certainty, but given U.S. politics, vulnerability from concentration needs to be recognized and remedial measures must be initiated. The high degree of dependence on the U.S., where per capita consumption is already at a

saturated level, does subject the Alberta industry to greater market risk than if the market was more diversified.



Source: World Trade Atlas



Source: World Trade Atlas

This concentration or dependence on the U.S. has long been recognized in Canadian trade policy literature, and efforts by industry and governments to reduce this dependence have been undertaken, unfortunately with limited success. Nonetheless, efforts by industry and the provincial government show concern with the vulnerability of high dependence. An example of this is the development of the Japanese market for livestock products. While it has to be recognized that Japan is indeed a desirable high value market, the competition with U.S., Australia and New Zealand is intense. The best opportunities are provided by the emerging markets of Korea, Taiwan, China, and other Asian countries, which have rapidly rising consumption levels of meat and high value processed foods and who are short of resources and products. But, as with the Japanese market, competition is strong from other suppliers.

Market development efforts require long term organization and investment as illustrated by the work of the Australian Livestock and Meat Board, and the Dairy Boards of both Australia and New Zealand. Another example is the Australian investment in the Chinese brewing industry, and warehousing facilities in order to gain a backdoor entrance for its malting barley. Australian trade promotion activity for dairy products undertaken

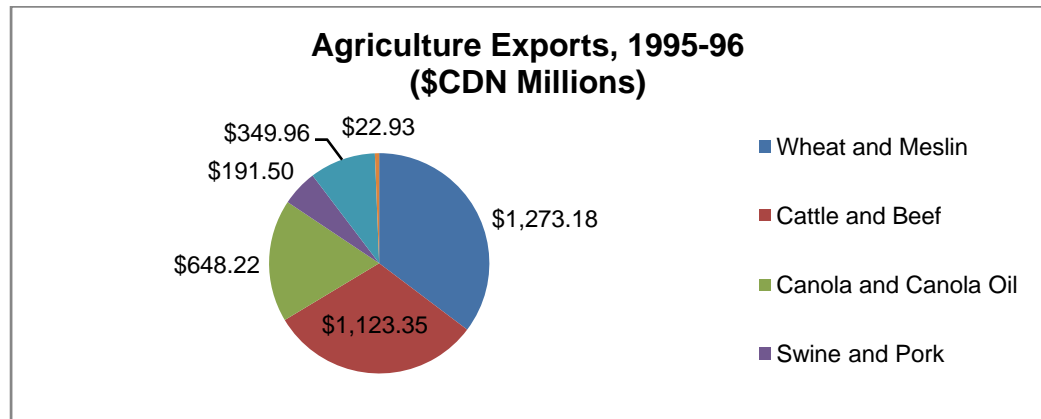
for decades and more recently into the Indian market for peas, lentils and beans are examples of market development investment jointly by government and industry.

In the case of Alberta, the transportation infrastructure in place, the relatively low costs of transportation and market access (tariffs and non-tariff barriers), and the commonality of language and business practices in the U.S. encouraged the north-south flow of goods and people. Again, the existence of the CWB for marketing wheat and barley, the traditional principal crops, provided little incentive to undertake marketing investment. The Government of Alberta provided leadership for such market development activity in the 1970s, 1980s and even 1990s but clearly there has been much less initiative or leadership and long term vision in more recent years. The dominance and resultant complacency from the growth of oil and gas in the provincial economy have contributed to this in some measure. Prices for agriculture and food products are still notorious for volatility and industry naturally reacts to this by pulling inwards, underlining need for Government support, leadership and industry wide organization towards long term strategy and activity. By no means is the importance of the U.S. market for Alberta agriculture and food exports diminished as it remains the most stable and reliable trading partner for Alberta and for Canada. Its growth is of strategic importance.

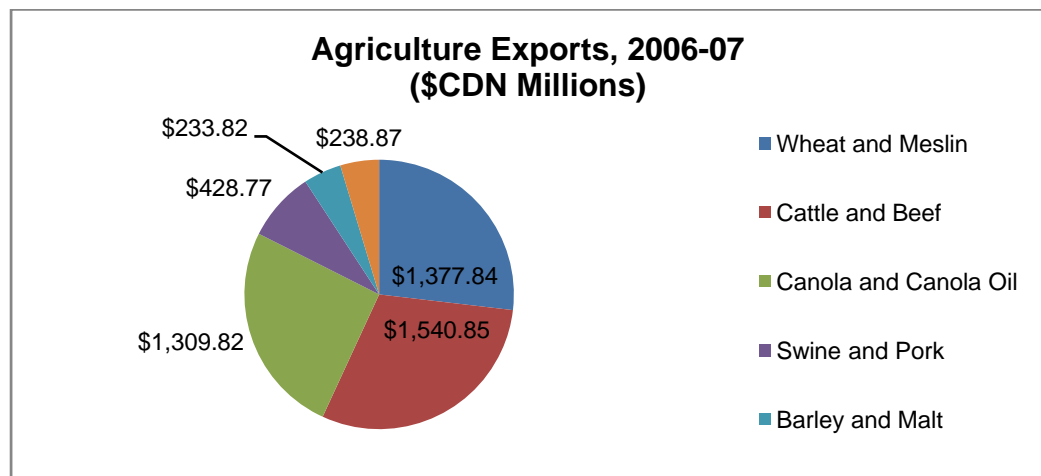
### **Concentration of the Composition of Agriculture and Food Trade**

The composition of the trade is another important factor in the performance of the Alberta agriculture and food export sector. In the 1960s, 1970s and early 1980s, trade was heavily weighted in primary products with crops and live cattle as the dominant components. Since the late 1980s and in the 1990s, there has been a diversification in production and manufacturing of agriculture and food production in Alberta. Progress in the last decade has been relatively muted and this is reflected in the makeup of the export trade.

At the start of the decade, exports were about equally divided between the livestock and products and the rest of exports. Livestock and products comprised 45% of exports in 2000-01 but declined to 34% in 2006-07. This is a significant shift even accounting for the notorious variations in agricultural production. Prices of grain and oilseeds and their products have escalated sharply – a trend the data for the first half of 2008 will reflect –, though there had been a relative downturn since the middle of the year. Consequently, the share of non-livestock products increased from 54% in 2000-2001 to 65% in 2006-2007. This is contrary to expectations as high value livestock production and processing in Alberta were thought to have a competitive advantage and adding value has been encouraged as a policy objective for some time. Moreover, demand for livestock products -- whether poultry, pork or beef -- has been much more positive than demand for cereals, particularly in large emerging markets with rising disposable income such as China, Korea, Taiwan, Indonesia, etc. This performance is surprising given the realities of the market, such as the imperative to add value to primary production in order to achieve growth and the limits imposed by population and per capita consumption levels in the domestic market. Supply management in Canada constrains participation in the poultry trade, which has achieved tremendous growth in world markets. However, there are opportunities in specialty or niche poultry markets, in which bulk shippers such as Brazil and the U.S. could be at a disadvantage.



Source: World Trade Atlas



Source: World Trade Atlas

## Livestock

### Beef

The exports of live cattle are recovering from the BSE disaster. The U.S., which is in practice the only commercial market for live cattle, has yet to be fully opened to older animals and the regulatory constraints of segregation and animal identification remain a hindrance to trade. Exports of beef are similarly influenced; comparison of pre-BSE data to 2006-07 must take account of the slow and regulated increase in the market for Canadian beef in the U.S. and even slower and restricted access for Canadian beef into such important markets as Japan, Korea, Taiwan and the potentially largest emerging market of China. While the BSE effect will likely continue to diminish, the threat of protectionism in the U.S is real and continuing. The U.S. Ranchers-Cattlemen Action Legal Fund (RCALF) in its new guise remains a force to be contended with and the free trade orientation of the U.S. National Cattle and Beef Association is under pressure. The dominance of the National Cattle and Beef Association and other national organizations in influencing government policy in the U.S. was severely tested during the RCALF litigation over Canadian beef exports. The traditional support for, and close collaboration with, the Canadian industry by these national organizations, including the National Meat Institute, cannot be taken for granted, even though collaboration with them is essential.

This was amply demonstrated in the lead up to the U.S. legislation and the likelihood of even greater restrictions in the requirements for 'country of origin' labeling, which has had a long history in the U.S agriculture and food industry. Country of origin labeling received added importance with the profile of food safety incidents and Canadian livestock trade was sideswiped in this larger process. Though such labeling is a generally accepted practice in international trade, its impact on supplier countries' established trading patterns can be discriminatory and expensive.

The politics of the meat packing industry within the U.S. presents an added complication to the resolution of this issue for the Albertan and broader Canadian industry. Adjustment to country of origin labeling should have been initiated in the 1990s when the politics of protectionism through trade actions gained momentum in the U.S. Branding of meat and dairy by Australia and New Zealand, or for that matter Canadian Bacon, can be a capital intensive and medium to long term effort but the dividends are attractive. It would be to the long term benefit of the cattle and beef industry to explore ways and means to make this country of origin labeling requirement an advantage by combining it with other environmental, food safety practices and product differentiation for Alberta beef not only in the U.S. market, but also in other markets where consumer behavior is similarly inclined. Clearly the control by U.S. multinationals of the beef processing industry in Alberta, which contributed much to the growth of this industry in earlier years, will be a factor to contend with in this new environment.

The continuing effort to develop new and growing markets and the greater efforts to reduce tariff and non tariff barriers through WTO and more favorable trading regimes through bilateral trade agreements remain critical to the complementary efforts of market development and promotion. Global demand and higher prices for beef and meat is expected to increase rapidly as a result of the explosion of urbanization in countries such as China, India, and others in South America. Major exporting countries such as Brazil and



Australia are competitively placed to exploit these opportunities. Canada, and specifically Alberta, could be well placed to fill the quality, higher priced beef niche markets of Europe, Japan, the U.S, etc. The Alberta and the national beef organizations have clearly been active in the development of new market opportunities for several years, as has the Alberta Ministry of Agriculture and Rural Development. However, these efforts pale in comparison to competitors, both in terms of resources from governments and industry as well as time horizons. Recent restructuring of Alberta's Agriculture Department in terms of the Livestock Agency, loosely modeled on the Australian and New Zealand meat and livestock boards, should result in concentrated efforts by Alberta to develop products in alternative markets.

### **Pork**

The hog industry has also undergone large shifts in structure, influenced by changes in grain transportation policies of earlier years and more recently, changes in the structure of the industry. The dramatic increase in the number of large scale producers (these larger operations specializing in barrow to finish, contract production, and vertical integration through the supply chain) has contributed to increased efficiencies and competitiveness of primary hog production. Environmental constraints in the traditional hog producing areas of the U.S. and several other producing and importing countries limit the expansion of hog production. Alberta has fewer such constraints given land and water resources and population density and distribution.

As indicated earlier, structural changes in processing through acquisitions and mergers within Canada and Alberta have also been an important factor in Alberta exports of pork, which just about doubled between 2000-01 and 2006-07, while exports of live hogs halved over the same period. Several factors have played a role in the growth and performance of this industry. The elimination of the single selling desk for hogs in 1996 and establishment of open marketing, though initially disruptive in terms of producer/processor relations, have driven a number of progressive initiatives. Contract sales and vertical integration previously limited have now become the norm in the industry. The hog industry in Alberta was among the first to adopt the Hazard Analysis Critical Control Program (HACCP) to increase food safety and reduce the risk of contamination. The Canadian Quality Assurance (CQA) program throughout the entire supply chain has been an important selling factor both in Canada and the export markets.

Global markets for pork have increased second only to the poultry market and a number of factors account for this growth. Among them are both supply and demand factors relative to beef in many of the large and emerging consuming markets such as China and most non-Islamic South East Asia, Russia and Eastern Europe where pork has traditionally been the preferred meat. Rising incomes and limited production resources (for production of beef) have increased the opportunity to produce and consume more pork, but many of these countries have relatively high tariffs and other protective measures. Traditional pork exporters such as the Netherlands, Denmark and the U.S. have established a historical foothold among several of these import markets. The U.S., which was the dominant market for Alberta pork exports in earlier years to the extent of 40%, has now diminished in importance compared to Japan, Russia, Korea, and Taiwan among others. Efforts by industry and the provincial government to develop markets in China and Mexico could pay large dividends over time. Structural marketing trends and consumer

preferences will require the maintenance and enhancement of quality, food safety, tracking and tracing to ensure growth of these markets for Alberta pork.

From a policy perspective the development and growth of demand for pork in emerging markets merits high priority in Alberta. Unfortunately, the hog industry attracts much less attention than the high profile cattle and beef industry. The sharp increase in feed costs, as prices for grain and oilseed meal rose in 2007 and most of 2008, has as much, if not more, effect on the pork industry as it has for cattle and beef. As in the case of the latter, prices for hogs has remained stagnant or declined in the short run, sharply reducing margins. The dependence of the live hog trade on the U.S. market is also affected by the country of origin labeling requirements. As with beef, this is a market reality and Alberta and Canada industry must adapt to meet the challenge. Here too, country of origin labeling could be made a long term marketing opportunity in the U.S. and in emerging markets.

Primary livestock production – cattle, hogs and specialty animals such as bison – has abundant resources for expansion in Alberta. Processing, which is essential to the growth of primary production, remains a labour intensive operation. In recent years, labour shortages and escalating labour costs have been important constraints for further investment and expansion in the Alberta meat industry. It is all the more critical to increase the extent of adding value in both primary production through animal genomics, quality, tracking and tracing, organic ranching etc. and in meat processing through packaged and ready foods, food safety protocols and product differentiation. Such value adding measures reduce the labour cost component of the final product while allowing for higher wages to induce the supply of labour.

## **Crops**

### **Wheat**

In the crops sector, wheat continues to be king. Production of wheat has mostly ranged between six to eight million tonnes per year in the last decade. Yields plunged to an historical low of 28 bushels per acre in 2002, but then rose to almost 48 bushels in 2005. As in most other non-irrigated wheat producing areas, weather can be the make-or-break factor. Given the restricted resource base for wheat production in Alberta, and Western Canada in general, yields will remain the main growth determinant for this industry. Therefore, public investment in crop yield research could play a critical role for this industry.

World markets for wheat are expected to be strong because of wide ranging factors on both the supply and demand sides of the equation. Among supply factors, one could include the shift in resources to production of corn and crops suited to the development of alternate energy – ethanol in the U.S. and diesel from oilseeds – though relative returns to crops may cause shifts from year to year. Another significant factor is the reduction in support programs including export subsidies, particularly in the E.U. and the U.S., as the Doha Round discipline materializes. On the demand side, population growth and increases in per capita consumption from changing income and consumption patterns ensure a growing global market for wheat and wheat products.

One of the most controversial and vexing issues for Alberta and Western Canada on the wheat trade may well be resolved if the proposed discipline on State Trade Enterprises in the Doha Round becomes effective.

The debate on the institutional function of the Canadian Wheat Board (CWB) continues. The decline of the role of state monopolies in food production and trade over the past several years in several countries has diminished the purported benefits conferred by the CWB. Whilst literally millions of dollars have been expended by the pro- and anti-CWB groups exploring the benefits and costs to Western/Alberta grain producers, much less attention has been paid to alternate marketing arrangements. Unlike Australian government and industry collaboration, which has been moving to a less monopolistic wheat marketing system over several years, the CWB has undertaken cosmetic changes in recent years. Given that the export monopoly would be eliminated following the successful completion of the Doha Round, it is important that the capital and marketing structure of a privatized CWB be urgently addressed. Again the Australian model is germane. Moreover, Canada has a number of multinational and domestic grain companies who undertake grain export functions on behalf of the board and direct exports of other grains and oilseeds. An expanded role for these in the future should be considered.

### **Barley**

The issues for barley are considerably different than for wheat, apart from the CWB marketing monopoly issue. Productivity, measured in per acre yields, has stagnated relative to other crops, in particular corn. Production of barley, having expanded in the 1980s, has remained relatively stable since then despite the growth in the feedlot industry. In recent years, both industry and government are acutely aware of the consequences of the declining competitiveness of this feed grain. Efforts such as that of the Alberta Crop Industry Development Fund (ACIDF) and others to improve yield and feed efficiency, though belated, are encouraging. Apart from the adverse impact of competitiveness of the livestock sector, the growth in the global markets has been relatively stagnant though fluctuating quite widely.

Exports of barley have been on a long term decline in Western Canada. Export opportunities in certain countries for food and as a preferred animal feed could be considerably enhanced with the discipline on support programs in Western Europe as a result of the E.U. agriculture reform agenda as well as the likely changes that would be imposed from a successful Doha Round agriculture agreement. Alberta exports of the higher value malt of barley, such as the special variety of barley for shochu beer in Japan, have shown marked increase in recent years. Such market innovations need to be aggressively pursued by industry with provincial government support for research and development.

### **Oilseed**

As noted earlier, a number of developments including research and development, trade regulations (GRAS status for canola oil in the U.S.) global supply and demand balances for oilseed products and strong policy support led to the growth of the oilseed and oilseed processing industry in Alberta. Alberta accounts for roughly one quarter of Canada's seed production and exports of canola oil. As in the meat processing industry, the structure of the oilseed processing industry has changed with consolidation and mergers of processing

capacity in Alberta. Three of the world's largest oilseed processors now operate in Alberta: ADM, Bunge and Canbra. World markets for oilseeds and vegetable oils have been expanding very rapidly as a result of sharp increases in the relatively low levels of per capita consumption in developing countries and in emerging markets. Exports of canola seed are now second only to wheat. Exports of both crude and refined canola oils have made impressive gains, having more than doubled in the past decade. Further growth in exports is only limited by the capacity to increase production of Canola.

### **Potatoes**

Potatoes have been another success story in the crops and crop processing industry. Alberta potato producers now account for roughly one fifth of Canadian production. Exports of seed potatoes and processed products, such as frozen French fries, play a dominant role in the sustainability and growth of this industry. Export growth has been high and steady despite protectionist actions from time to time in the U.S. processing industry or the Mexican seed and commercial potato market. Canada has successfully negotiated protocols with a number of countries, including China, the world's largest producer, to access the seed potato market. The principal market for processed potatoes is frozen French fries in the American fast food industry, though other markets such as Japan are becoming increasingly important. Clearly the growth in the fast food industry in emerging markets in Asia and South America provide new and potentially large growth opportunities. The growth in Alberta exports of processed potatoes is spectacular, increasing from less than \$100 million at the outset of 2000 to almost \$250 million in 2007-08. However, potato markets seem more susceptible to disruptions caused by occurrences of disease (or allegations of disease) followed by trade restrictions.

### **Other Commodities**

A number of other crops have opened new and expanding opportunities for the Alberta crops sector. Among these are peas, lentils and beans, seeds for sowing, hay and alfalfa products, honey and peat moss among primary crops or milled 'other' cereals and cereal preparations, other foods/ food materials, packaged foods in the food manufacturing sector. Here again, growth in demand from urbanization and rising incomes of middle income clusters in emerging markets and rising health, nutrition and food safety considerations in developed countries are a strong positive factor for future growth in these exports. Lack of market access is an important obstacle to exports of several of these commodities. For example, there are high and variable tariffs for pulses in India, the world's largest market. On the other hand, world trade in packaged frozen and non-frozen convenience foods has been expanding rapidly as a result of urbanization, work patterns and income levels. Having made significant gains in earlier years, however, Alberta exports of these crops appear to have stagnated in recent years. At the same time, the domestic market for such Canadian products has competition from U.S. or European multinationals with established global brands. Thus there is no significant expanding domestic base for development. The experience with the growth of food manufacturing in Alberta during the 1980s and 1990s would suggest the need for intensive efforts to attract investment from food processing multinationals into Alberta.

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## Conclusions

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The rapid growth in exports of agriculture and food products from Alberta in the 1980s and 1990s has slowed since 2000. This is in sharp contrast to trends in world agriculture and food trade which have continued to expand rapidly from US\$471 billion in 2001-2002 to US\$857 billion in 2006-2007, an increase of 82%. Indeed, world trade in cereals, oil seeds and meat just about doubled in the span of seven years and more than tripled in the case of animal, vegetable fats and oils, which are main contributors to the Alberta agriculture and food export trade. World trade in processed, value added agriculture products continued to grow at a faster rate than primary products generally.

Clearly, competition from exports from some emerging lower cost suppliers such as Brazil, Argentina, South Africa, China and others have been a competitive factor relative to most developed country exports. This is true for trade in primary as well as value added commodities. World markets have become more competitive with globalization of production, value adding and marketing. Analysis of the Alberta export trade over the past two decades identified some specific factors that affected the province's performance. Some of these factors are within the control and influence of the industry itself, some within the influence of public policy in Alberta and the Federal Government, and others are less amenable to such influences.

The critical factor of competitiveness needs urgent attention as its impact on all Alberta exports can only increase over time, just as it has over the past several years. Given that the bulk of input costs in the food industry are determined by international market prices, growth in productivity and product differentiation are essential to competitiveness of the agriculture and food industry in Alberta. In turn research and product development are an important component of growth in productivity and innovation. Canada, as generally acknowledged, does not rank highly relative to other advanced countries in terms of public and private sector expenditures on research and product development.

Food safety and quality, with new attributes such as environmentally friendly production methods, organic, health and nutrition considerations, animal rights and treatment, and other attributes, are becoming important factors of product differentiation and price reduction if not offsetting the disadvantages of high cost inputs such as labour. While small scale niche production and marketing are often suited to local markets, relatively medium to large scale production are critical to successful international marketing. In the case of Alberta, the large scale investment in meat, oilseed and potato processing by multinationals in the 1990s was important to the spurt in exports, but a slowdown of investment in the past several years is one causal factor for the lack of continued export growth. This by no means diminishes the contribution of niche production entities to the Alberta agriculture and food industry, indeed such production has made important contributions to the diversification and growth of the industry over most of the period reviewed. These niche operations require facilitative services supplied by both the public sector and private enterprise to assist in a number of functions including finance, insurance, customer relations, transportation, etc. Measures to stimulate research and product development through further fiscal and monetary stimulus should be seriously considered. The Food Processing Development Centre in Leduc is an example of an initiative that can be undertaken through public-private collaboration in product development.

While the U.S. is likely to remain the principal source of foreign direct investment in Canadian food processing and marketing, renewed efforts to attract European and Asian investments to Alberta to meet their growing needs of manufactured foods is required. Branding the province for its pristine land and water resources, its developed infrastructure, fiscal policy, and the scope for food safety practices and regulations, including tracking, tracing, and other product differentiation opportunities, could provide an advantage for Alberta over other jurisdictions.

Trade policy and market development have been important contributors to the growth of Alberta exports of food and agriculture. These have helped in opening market opportunities not only by reducing trade barriers – both tariffs and non-tariffs – but also by reducing or curbing non-competitive practices. The Canada-U.S. FTA and latterly the NAFTA have clearly contributed to this success, more in the livestock than the crops sector given the variation in pre-agreement trade constraints. More importantly, these agreements have helped to abate and resolve contingency and other politically driven protectionist measures in the U.S. From the larger Canada/Alberta agriculture export perspective, the diffidence to liberalize the trade in the Canadian supply managed sector, marketing board practices for horticulture, and the monopoly of the CWB did not allow for a more robust FTA or NAFTA agreement. This Canadian position has also not been helpful in multilateral trade negotiations to improve Alberta export opportunities. It is imperative that this protectionist inclination be amended in future negotiations to achieve the maximum benefit for the Albertan and Canadian agriculture and food industries. Serious consideration needs to be given to amend supply management through appropriate compensation for losses that this imposes on many producers. Failure to address this issue in the 1980s escalated costs sharply. Compensation, as in the case of the abolition of the Crow benefit with a reasonable cap for individual producers is one such approach. Similarly, while the elimination of the CWB monopoly in the Doha Round of trade negotiations seems inevitable, urgent attention to a capitalization arrangement would assist the grain export trade with less disruption. A successful Doha Round outcome would allow for appropriate adjustment measures over time. The Doha Round could also provide Canada and Alberta with the political opportunity to reform the support, or subsidy systems and levels, to reflect market conditions better and to facilitate structural changes to meet the competition in the agriculture and food industry.

As elaborated earlier, exchange rates have been an important factor in the performance of agriculture exports from Alberta. The Canadian dollar is expected to appreciate significantly over the course of the next few years relative to the U.S. and other key currencies such as the Euro and the Yen. The widely expected depreciation of the U.S. dollar was enhanced by the fiscal and monetary policies of the U.S. during the past eight to twelve months. Exchange rates will have a significant adverse impact on Canada's agriculture export performance, given the high concentration of Alberta exports in the U.S. market and that the U.S. is Canada's main competitor in third-world markets for several commodities. The appreciation of the Canadian dollar will reduce the competitiveness of primary agriculture exports in our principal markets. Hence there is urgency for industry and governments to take all measures within their control to improve the competitiveness of the sector.

Concentration in direction and, to some extent, in composition of exports, was identified as a factor in the performance of Alberta agriculture exports. Given the likely

trends in currency values, concentration in the U.S. market will make these exports even more vulnerable. Diversification into emerging markets such as China, the ASEAN group of countries, and Russia is, therefore, necessary to sustain and grow Alberta food exports. To gain robust market access, Alberta could also urge the Federal Government to pursue trade agreements with other countries, such as the E.U., Japan, China, Taiwan, Korea and others, more aggressively and without the millstone of the protected components of Canadian agriculture. A successful conclusion of the Doha Round as it relates to agriculture, would improve the environment for a bilateral free trade agreement with the E.U. and discussions have been underway in recent months.

As shown earlier, the composition of Alberta agriculture exports is much less diversified than would be indicated by the range of production in livestock and crops. Moreover, the manufacturing segment has demonstrated a diminished rate of growth since 2000, in both production and trade. Initializing factors that could enhance the rate of growth in processing should include efforts to attract foreign direct investment, and to expand public and private investment in research and development in the food industry, finance and trade facilitation functions, etc. World markets for food and agriculture are reflective of their own culture, tastes and preferences, and do not necessarily reflect North American production methods and consumption patterns. Direct foreign investment into Alberta from Europe, Asia (especially China and Japan) and other food importing countries should be a high priority for the government in order to establish links between Alberta production and offshore consumption. The Alberta land and water base, the climatic conditions conducive to control of pests and diseases, favourable primary agriculture production conditions, are attractive to foreign investment and should be strategic considerations in Alberta's place in the emerging global food market.

## Appendix: Tables



**Annex Table 1a – Farm Cash Receipts, Crops (\$ 000's)**

Year	Total Farm Cash Receipts	Wheat	Oat	Barley	Rye	Flax-seed	Canola	Sugar Beets	Dry Peas	Mustard Seed	Sun-flower Seed	Lentils	Forage & Grass Seed	Hay & Clover	Potatoes	Vegetables	Floriculture & Nursery	Other
1985	1,550,628	698,803	17,842	269,566	4,737	7,279	342,626	3,337	2,039	4,488	-	-	14,182	11,293	27,175	25,943	31,840	89,478
1986	1,333,459	517,250	16,323	318,687	4,645	5,534	267,031	9,001	2,382	7,650	-	1,954	30,486	12,345	39,156	29,301	32,044	39,670
1987	1,313,560	559,646	19,219	232,205	4,743	6,012	313,316	12,680	3,944	6,151	1,045	1,641	18,269	8,031	34,324	30,846	43,729	17,759
1988	1,637,745	686,440	61,636	256,552	7,720	7,217	437,847	19,380	9,595	5,649	776	1,682	23,838	12,390	41,471	35,018	54,432	23,898
1989	1,860,196	690,843	84,540	376,767	5,921	6,448	419,740	23,342	12,476	7,431	701	800	14,400	18,709	43,135	37,294	53,639	64,010
1990	1,641,397	713,863	35,564	272,197	5,442	8,349	336,232	26,586	10,818	6,622	463	852	15,709	16,802	40,141	45,412	62,984	43,361
1991	1,537,300	685,230	22,770	225,109	4,688	5,128	320,224	20,877	16,933	6,181	603	1,259	13,497	18,473	39,103	36,254	56,139	64,832
1992	1,502,321	604,720	39,803	192,114	4,628	5,912	388,758	17,277	21,986	6,763	796	2,619	23,186	26,409	38,892	38,964	66,295	23,199
1993	1,562,256	593,161	50,206	189,381	5,087	9,312	414,540	21,965	29,910	6,180	1,089	2,270	24,959	42,505	52,960	45,300	61,511	11,920
1994	2,162,536	840,653	45,835	265,713	6,318	9,186	773,332	26,627	50,332	8,225	943	3,362	22,256	47,372	44,981	47,345	58,129	88,073
1995	2,625,273	1,064,743	70,856	332,953	7,305	8,933	709,701	32,401	60,518	14,227	1,764	6,553	18,716	65,316	57,362	51,534	61,188	61,203
1996	2,974,815	1,241,345	88,387	470,725	7,330	9,094	794,467	27,008	59,406	16,628	1,499	4,620	30,407	60,338	61,515	52,713	54,713	5,380
1997	2,641,119	1,012,534	55,349	324,076	6,691	7,481	755,087	30,062	59,277	14,897	1,065	2,022	29,860	82,867	52,140	56,816	68,349	82,546
1998	2,503,767	863,418	34,220	198,273	4,182	7,832	881,378	38,402	59,516	15,022	1,277	2,253	30,757	79,387	63,862	60,515	65,138	98,335
1999	2,331,403	975,506	22,980	174,266	3,632	5,118	608,211	29,651	57,229	12,959	1,102	3,469	40,601	81,857	74,892	53,743	75,730	110,457
2000	2,343,551	959,622	20,707	220,361	2,978	5,616	556,266	32,899	53,893	6,592	1,456	3,406	42,091	97,895	113,096	63,685	103,980	59,008
2001	2,290,209	936,118	31,469	213,676	3,520	4,379	586,097	19,333	70,349	4,451	1,633	1,875	19,303	107,399	107,146	65,397	110,255	7,809
2002	2,136,646	819,953	43,697	161,637	2,717	4,897	543,321	20,072	48,053	8,808	1,639	1,028	27,482	40,299	146,783	60,641	114,315	91,304
2003	1,971,402	655,157	21,428	164,107	1,519	3,953	324,433	22,732	58,140	12,545	1,537	1,688	21,381	35,623	134,124	68,802	114,946	29,287
2004	2,606,486	964,445	23,778	209,184	9,748	7,707	785,837	30,921	78,434	15,342	788	2,232	17,532	39,035	166,294	77,830	123,908	53,471
2005	2,372,355	799,910	40,125	140,386	1,772	4,319	742,650	32,140	63,231	12,871	514	2,718	28,290	42,559	138,406	77,492	127,712	117,260
2006	2,584,392	815,530	30,436	143,353	2,345	3,315	990,410	38,180	71,950	9,052	-	1,875	37,871	39,072	152,116	78,558	146,101	24,228
2007	3,410,444	1,251,665	35,778	282,024	6,890	5,965	1,215,508	34,726	100,294	11,636	-	584	32,304	43,122	148,163	82,556	145,570	13,659

Source: Alberta Agriculture, Food and Rural Development Agriculture Statistics Yearbook (various issues)

**Annex Table 1b – Farm Cash Receipts – Livestock (\$ 000's)**

Year	Total Livestock	Cattle & Calves	Hogs	Sheep & Lambs	Total Supply Management	Dairy Products	Hens, Chickens, & Turkeys	Eggs & Hatcheries	Honey	Other
1985	1,811,291	1,181,405	248,331	6,800	345,606	215,637	88,570	41,399	11,906	17,243
1986	1,789,095	1,116,853	279,377	7,854	349,503	223,658	83,754	42,091	12,982	22,526
1987	1,919,707	1,224,926	287,590	9,247	354,171	221,104	92,143	40,924	12,502	31,271
1988	2,081,308	1,400,573	259,397	7,978	368,728	238,186	87,729	42,813	10,139	34,493
1989	2,179,241	1,474,780	265,031	8,695	386,966	246,982	96,267	43,717	9,001	34,768
1990	2,323,575	1,573,696	298,895	8,081	397,210	251,207	104,035	41,968	11,666	34,027
1991	2,256,090	1,537,410	276,091	7,386	393,359	250,093	99,609	43,657	11,666	30,178
1992	2,563,910	1,815,960	276,903	13,245	392,086	248,537	97,595	45,954	13,001	52,715
1993	2,925,608	2,109,871	322,885	14,513	395,852	244,663	103,708	47,481	13,352	69,135
1994	3,036,576	2,191,208	315,333	13,100	421,021	257,843	112,680	50,498	15,609	80,305
1995	3,166,414	2,221,065	381,812	14,394	430,846	265,643	112,404	52,799	19,689	98,608
1996	3,401,506	2,347,628	444,585	17,145	471,041	290,753	125,115	55,173	19,693	101,414
1997	3,602,677	2,535,231	438,374	15,297	484,647	316,826	129,373	38,448	22,857	106,271
1998	3,713,494	2,763,222	309,938	12,763	485,205	311,460	136,058	37,687	30,734	111,632
1999	3,971,292	2,968,181	344,341	13,385	498,662	327,063	133,836	37,763	25,832	120,891
2000	4,511,418	3,339,507	496,616	16,080	495,745	318,454	138,249	39,042	19,911	143,559
2001	5,239,506	3,913,176	572,406	14,050	547,630	348,378	156,732	42,520	243,141	167,933
2002	5,086,794	3,835,950	465,410	19,118	554,977	366,827	143,513	44,637	45,679	165,660
2003	3,709,380	2,477,430	458,571	15,799	579,715	384,704	149,290	45,721	57,452	120,413
2004	3,959,864	2,560,902	596,353	12,092	595,024	382,979	161,594	50,451	53,075	142,418
2005	4,342,566	2,980,303	544,413	16,786	610,184	398,675	165,924	45,585	39,230	151,650
2006	4,270,940	2,988,003	495,903	20,192	587,654	382,095	161,821	43,738	40,247	138,941
2007	4,412,824	3,104,215	465,579	19,600	651,956	426,818	180,382	44,756	35,011	136,463

Source: Alberta Agriculture, Food and Rural Development Agriculture Statistics Yearbook (various issues)

Annex Table 2a and 2b, Agriculture Livestock and Crop Exports

<b>2a Alberta Agricultural Livestock Exports, by 2-digit HS Category, 1995-2008 (\$CDN Millions)</b>															
HS	Description	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
01	Live Animals	753.5	831.5	738.1	797.4	559.1	633.1	863.0	740.4	270.3	94.9	372.4	783.8	797.8	627.8
02	Meat	592.2	739.7	948.1	1095.4	1394.5	1665.1	2011.6	1901.7	1401.4	1958.6	1960.6	1407.2	1299.8	1487.8
03	Fish And Seafood	0.7	0.4	0.9	0.8	2.1	0.4	0.3	0.6	0.7	1.5	4.2	0.5	1.0	0.3
04	Dairy, Eggs, Honey, Etc	33.9	28.0	24.5	17.6	19.2	14.0	17.3	27.5	28.5	18.5	12.8	9.5	19.9	22.7
05	Other of Animal Origin	12.7	21.1	24.3	33.7	44.5	42.2	42.5	47.8	30.6	27.8	37.9	44.0	47.1	53.0

Source: World Trade Atlas

<b>2b Alberta Agricultural Crop Exports, by 2-digit HS Category, 1995-2008 (\$CDN Millions)</b>															
06	Live Trees and Plants	0.3	0.5	0.9	1.6	0.5	0.7	0.9	0.7	0.6	0.3	0.4	0.3	0.4	0.4
07	Vegetables	83.3	91.3	107.9	123.2	135.4	160.1	154.7	95.5	84.6	92.5	78.5	94.8	87.1	54.6
08	Edible Fruit and Nuts	0.0	0.1	0.1	0.1	0.2	0.0	0.1	0.8	0.7	1.0	2.7	3.8	4.8	4.3
09	Spices, Coffee and Tea	0.2	0.2	0.4	0.5	0.5	0.5	0.4	0.4	0.8	0.8	1.1	2.6	1.7	1.1
10	Cereals	1328.8	1893.3	1744.5	1239.9	1102.8	1358.9	1296.2	865.0	815.0	1201.6	992.1	1321.1	1642.4	2415.3
11	Milling; Malt; Starch	94.5	128.0	121.6	108.4	106.9	135.6	171.3	169.4	151.1	147.8	134.9	152.0	179.0	302.7
12	Misc Grain, Seed, Fruit	650.8	503.4	573.6	664.1	580.0	548.2	620.5	564.6	457.3	626.9	672.8	894.0	1144.8	1782.5
13	Lac;Vegetabl Sap,Extrct	0.5	0.0	0.0	0.2	0.7	1.2	0.5	0.6	1.3	1.6	1.9	4.1	1.4	2.5
14	Other Vegetable	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.3	0.3
15	Fats And Oils	176.8	165.1	226.8	260.5	158.1	169.1	170.9	131.2	200.0	344.6	311.8	367.2	498.9	582.4
16	Prepared Meat, Fish, etc	24.5	32.0	25.2	6.9	5.4	8.0	14.7	22.0	13.0	9.5	4.5	2.4	4.4	2.3
17	Sugars	1.8	1.3	5.1	10.6	6.3	7.8	4.6	10.4	7.6	16.1	25.8	39.0	14.5	31.9
18	Cocoa	0.6	0.4	0.8	1.1	0.9	0.9	1.3	1.7	0.6	0.6	0.6	0.8	0.5	0.6
19	Baking Related	8.6	8.3	11.5	22.8	26.2	38.1	65.5	73.1	61.3	37.2	39.4	40.3	38.4	41.1
20	Preserved Food	6.6	6.9	11.1	15.6	72.7	160.3	168.0	178.6	155.9	242.8	216.7	246.4	256.0	254.5
21	Miscellaneous Food	4.3	5.9	7.7	13.7	12.7	15.6	11.9	14.0	20.0	17.8	20.0	19.3	18.5	18.6
22	Beverages	39.8	48.3	49.3	56.9	56.1	64.5	74.3	65.9	66.7	62.6	56.9	54.7	52.7	61.6
23	Food Waste; Animal Feed	91.6	103.4	124.2	126.6	126.4	146.2	140.5	123.6	162.0	185.2	149.1	129.8	141.8	196.7
24	Tobacco	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
	<b>Total</b>	<b>3152.4</b>	<b>3777.6</b>	<b>4008.6</b>	<b>3800.2</b>	<b>3852.2</b>	<b>4537.4</b>	<b>4968.1</b>	<b>4295.1</b>	<b>3659.6</b>	<b>4995.5</b>	<b>4725.0</b>	<b>4833.9</b>	<b>5455.4</b>	<b>7317.3</b>

Source: World Trade Atlas

**Annex Table 3. Agriculture and Food Sales, 1993-2008 (\$CDN Million)**

Agri Food	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
All Manufacturing	20,595	24,885	28,491	30,677	34,186	32,840	34,823	44,469	45,565	40,966	46,220.6	53,630.4	61,386.1	63,722.6	67,132.2	
Food and Beverage Manufacturing	5,306	5,780	6,354	6,846	7,331	7,375	7,877	9,086	9,296	9,764	9,405.8	9,927.6	9,424.0	9,275.2	10,832.8	11,673.1
Food Manufacturing	x	x	x	x	x	6,660.4	7,184.7	8,312.5	8,423.4	9,055.1	8,524.8	9,113.4	8,588.7	8,538.4	10,052.9	
Beverage Manufacturing	x	x	x	x	x	714.1	692.5	773.5	872.6	709.2	881.0	814.1	835.3	736.8	779.9	
Animal Food Manufacturing	x	x	x	x	x	488.6	462.3	537.1	574.9	652.9	639.0	616.1	501.0	502.0	575.0	
Fruit and Vegetable Preserving	x	x	x	x	x	x	x	x	x	x	304.0	x	267.5	280.4	x	
Meat Products	x	x	x	x	x	3,619.9	4,240.5	4,954.3	5,126.0	4,849.8	4,885.4	5,122.8	5,148.8	5,091.4	5,386.9	
Dairy Products	x	x	x	x	x	758.5	x	828.9	878.3	1,655.4	1,011.7	1,067.6	x	x	x	
Sugars	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Grain and Oil seed Milling	x	x	x	x	x	1,060.6	984.6	792.5	730.8	770.3	912.3	1,051.6	931.8	894.7	1,096.5	
Seafood Preparation and Packaging	x	x	x	x	x	x	x	x	1.3	x	x	x	x	x	1.4	
Bakeries and Tortilla Manufacturing	x	x	x	x	x	234.5	x	x	330.0	260.5	x	312.1	291.4	x	x	
Other Food Manufacturing	x	x	x	x	x	309.1	x	x	461.1	499.4	x	548.9	556.0	546.5	566.1	

*Source: Annual Survey of Manufactures and logging and Monthly Survey of Manufacturing. Alberta Agriculture Statistics Yearbook (various issues)*

**Annex Table 5 - Alberta Agriculture Exports by 4-digit HS Code (\$CAD Millions)**

HS	Description	1995-96	2000-01	2006-07
	Alberta (All Exports)	\$ 29,930.28	\$ 56,707.75	\$ 80,941.57
	Total (Agriculture Exports)	\$ 4,257.49	\$ 5,500.82	\$ 6,000.28
1001	Wheat and Meslin	\$ 1,273.18	\$ 1,163.63	\$ 1,377.84
1205	Rape or Colza Seeds, Whether or Not Broken	\$ 440.33	\$ 417.04	\$ 819.19
0201	Meat of Bovine Animals, Fresh or Chilled	\$ 365.49	\$ 1,304.90	\$ 769.26
0102	Bovine Animals, Live	\$ 719.34	\$ 612.90	\$ 707.43
1514	Rapeseed, Colza or Mustard Oil etc, Not Chem Modif	\$ 140.03	\$ 124.18	\$ 393.16
0203	Meat of Swine (Pork), Fresh, Chilled or Frozen	\$ 129.56	\$ 191.48	\$ 374.05
2004	Vegetables Nesoi Prepared or Preserv Nesoi, Frozen	\$ 6.02	\$ 154.78	\$ 221.71
1214	Rutabagas, Hay, Clover & Other Forage Products	\$ 78.44	\$ 105.16	\$ 125.96
1003	Barley	\$ 265.69	\$ 137.31	\$ 116.99
1107	Malt, Whether or Not Roasted	\$ 84.27	\$ 112.48	\$ 116.83
2306	Oilcake etc Nesoi, From Veg Fats & Oils Nesoi	\$ 67.86	\$ 111.38	\$ 97.47
0206	Ed Offal, Bovine, Swine, Sheep, Goat, Horse, etc.	\$ 56.69	\$ 141.01	\$ 84.64
0202	Meat of Bovine Animals, Frozen	\$ 38.52	\$ 135.94	\$ 64.16
0713	Leguminous Vegetables, Dried Shelled	\$ 68.22	\$ 136.24	\$ 63.11
0103	Swine, Live	\$ 61.93	\$ 108.04	\$ 54.72
1209	Seeds, Fruit and Spores, For Sowing	\$ 26.01	\$ 38.72	\$ 46.64
0205	Meat of Horses, Asses, Mules, Hinnies Fr, Chld, Fz	\$ 46.05	\$ 58.56	\$ 46.30
1004	Oats	\$ 60.72	\$ 21.17	\$ 43.53
2208	Ethyl Alcohol, Udenat, Und 80% Alc; Spirit Beverag	\$ 38.41	\$ 41.29	\$ 37.67
1905	Bread, Pastry, Cakes Etc; Comm Wafers, Emp Caps Etc	\$ 6.37	\$ 45.63	\$ 35.12
2309	Preparations Used in Animal Feeding	\$ 15.15	\$ 14.77	\$ 30.87
0511	Animal Products Nesoi; Dead Animals, Inedible etc.	\$ 12.56	\$ 23.58	\$ 30.43
1104	Cereal Grains, Worked etc Nesoi; Cereal Germs, Wrk	\$ 9.56	\$ 8.75	\$ 23.33
1701	Cane or Beet Sugar & Chem Pure Sucrose, Solid Form	\$ 1.05	\$ 6.13	\$ 23.30
0101	Horses, Asses, Mules And Hinnies, Live	\$ 5.71	\$ 16.82	\$ 20.89
0701	Potatoes (Except Sweet Potatoes), Fresh or Chilled	\$ 16.92	\$ 19.80	\$ 17.16
2005	Vegetables Nesoi Prepared etc Nesoi, Not Frozen	\$ 0.37	\$ 5.75	\$ 15.69
2106	Food Preparations Nesoi	\$ 0.58	\$ 1.60	\$ 13.09
2207	Ethyl Alcohol, Udenat, Nun 80% Alc; Alcohol, Denat	\$ 0.06	\$ 12.02	\$ 12.37
1502	Fats, Bovine, Sheep or Goat, Raw Or Rendered	\$ 9.50	\$ 12.44	\$ 12.13
1207	Oil Seeds & Oleaginous Fruits Nesoi, Broken or Not	\$ 16.74	\$ 14.85	\$ 11.98
0504	Animal (Not Fish) Guts, Bladders, Stomachs & Parts	\$ 0.32	\$ 8.61	\$ 10.85
1101	Wheat or Meslin Flour	\$ 6.74	\$ 8.05	\$ 9.68
1103	Cereal Groats, Meal and Pellets	\$ 6.87	\$ 8.36	\$ 9.58
1002	Rye in the Grain	\$ 9.97	\$ 3.44	\$ 9.41
1517	Margarine; Edible Mixtures etc An or Veg Fat & Oil	\$ 4.43	\$ 10.81	\$ 9.23
1204	Flaxseed (Linseed), Whether or Not Broken	\$ 14.02	\$ 5.41	\$ 7.69
1516	An or Veg Fats & Oils, Hydrogen etc, Not Fur Prep	\$ 13.78	\$ 16.21	\$ 6.28
1109	Wheat Gluten, Whether or Not Dried	\$ -	\$ 11.21	\$ 3.55
1602	Prepared or Preserv Meat, Meat Offal & Blood Nesoi	\$ 26.06	\$ 10.16	\$ 2.47
2301	Flour, Meal etc of Meat etc, Not for Human; Greavs	\$ 6.88	\$ 11.37	\$ 2.06
0210	Meat & Ed Offal Salted, Dried etc. & Flour & Meal	\$ 24.88	\$ 1.18	\$ 0.94
2201	Waters, Natural etc, Not Sweetened etc; Ice & Snow	\$ 0.76	\$ 10.08	\$ 0.42

Source: World Trade Atlas

**Annex Table 6a – Alberta Agriculture Exports By Destination (HS Codes 1-24) \$CDN Millions**

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
<b>World</b>	3,905.9	4,609.0	4,746.7	4,597.6	4,411.2	5,170.5	5,831.2	5,035.5	3,929.8	5,090.4	5,097.3	5,617.7	6,253.2	7,945.1
<b>United States</b>	1,840.9	2,138.3	2,198.1	2,433.4	2,480.4	2,709.5	3,234.2	2,978.8	1,979.4	2,246.5	2,431.4	2,561.7	2,635.9	3,131.0
<b>Mexico</b>	303.6	355.8	361.1	444.2	421.5	639.5	893.9	820.2	629.1	1,231.3	941.1	1,029.0	1,227.2	1,741.9
<b>Japan</b>	655.1	643.8	696.4	593.7	568.3	655.7	778.0	790.5	664.7	772.4	826.4	784.2	901.9	1,199.2
<b>South Korea</b>	574.3	542.4	691.8	538.4	555.9	748.4	557.1	557.8	463.6	500.1	703.3	545.9	560.1	637.1
<b>China</b>	407.5	432.1	159.7	238.0	175.5	193.2	239.2	51.3	77.2	428.1	285.3	171.9	408.2	581.3

Source: World Trade Atlas

**Annex Table 6b – Alberta Agriculture Exports by Destination (HS Codes 1-24) Share of Total Agriculture Exports**

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
<b>United States</b>	47.1%	46.4%	46.3%	52.9%	56.2%	52.4%	55.5%	59.2%	50.4%	44.1%	47.7%	45.6%	42.2%	39.4%
<b>Mexico</b>	7.8%	7.7%	7.6%	9.7%	9.6%	12.4%	15.3%	16.3%	16.0%	24.2%	18.5%	18.3%	19.6%	21.9%
<b>Japan</b>	16.8%	14.0%	14.7%	12.9%	12.9%	12.7%	13.3%	15.7%	16.9%	15.2%	16.2%	14.0%	14.4%	15.1%
<b>South Korea</b>	14.7%	11.8%	14.6%	11.7%	12.6%	14.5%	9.6%	11.1%	11.8%	9.8%	13.8%	9.7%	9.0%	8.0%
<b>China</b>	10.4%	9.4%	3.4%	5.2%	4.0%	3.7%	4.1%	1.0%	2.0%	8.4%	5.6%	3.1%	6.5%	7.3%

Source: World Trade Atlas

**Annex Table 7 – Alberta Top Six Exports, 1995-96, 2000-01, 2006-07 (\$CDN Millions)**

HS Categories	Description	1995-96	2000-01	2006-07
1001	Wheat and Meslin	\$ 1,273.18	\$ 1,163.63	\$ 1,377.84
0201, 0202, 0202	Cattle and Beef	\$ 1,123.35	\$ 2,053.74	\$ 1,540.85
1205, 1514, 2306	Canola and Canola Oil	\$ 648.22	\$ 652.60	\$ 1,309.82
0203, 0103	Swine and Pork	\$ 191.50	\$ 299.51	\$ 428.77
1003, 1107	Barley and Malt	\$ 349.96	\$ 249.79	\$ 233.82
2004, 0701	Potatoes and Frozen Vegetables	\$ 22.93	\$ 174.59	\$ 238.87

Source: World Trade Atlas