The Importance of Agriculture and Agri-Food to British Columbia

Prepared by
Policy and Economics Branch
Ministry of Agriculture, Food and Fisheries
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General Description of Industry

Agriculture

British Columbia is noted for its diverse agricultural production. The province's varied topography, soils and climatic conditions make it possible for British Columbia farmers to produce over 250 commodities for domestic consumption and export. The agri-food industry is a vital, interdependent component of BC's economy. BC's growth in agriculture has outpaced the national growth rate over ten years and in 2002 generated revenues of more than $2.2 billion.

Nearly 98% of all BC farms are family oriented operations and corporate farming remains a small part of the BC farm structure. The family farm business continues to be an efficient means of achieving financial security at the primary production level. Between 1991 and 2001, the number of farm holdings increased 6% to 20,290 farms.

Less than 5 percent of total provincial land is arable and suitable for farming, although up to 30 per cent of the province has some agriculture potential. Farm holdings cover 2.5 million hectares, of which 617,500 hectares are in crops and 1.4 million hectares are utilized for pasture or grazing. Another 8.5 million hectares of Crown land are used for grazing or pasture land.

All arable soils have been mapped and classified on the basis of quality, and the best classes (Classes I–IV) have been placed within the Agricultural Land Reserve (ALR) to be maintained for agriculture and other compatible economic activities. While urban pressures for farmland conversion continue at the rural/urban fringe of major population centres, the ALR has been able to stem the historic loss of farmland. The net land area of the ALR has remained substantially the same although some additions and deletions have occurred. In the last ten years the ALR has increased from 4.708 million hectares to 4.727 million hectares. A land base protected for agriculture provides opportunities for the expansion of farming and ranching for a growing population.

Livestock and Related Products

Livestock production in BC includes cattle, hogs, poultry, eggs, dairy, honey, fur and game animals. The largest single component of the livestock sector in terms of farm cash receipts (19%) is the dairy industry, ranking 3rd highest in Canada. Dairy herds are located primarily in the Lower Mainland, southeastern Vancouver Island and the North Okanagan-Shuswap area. Smaller concentrations are also found in the Creston Valley, Bulkley Valley, North Central and Peace River regions.

In British Columbia the 10 million hectares, of grazing or pasture supports a 724,000 beef cattle herd and provides the forage equivalent of 900,000 AUMs. Advancements in cattle production technology have allowed for a faster rate of gain and therefore a shorter period of time for an animal to reach market weight. The beef livestock sector contributes approximately 17% of the province's farm cash receipts. While beef cattle are raised throughout the province on large and small operations, cattle ranching is carried out primarily on range lands of the southern and central interior, the Peace River district and the Kootenays.

Hogs are also raised throughout the province, with concentrations in the Lower Mainland, making up only 2 % of farm cash receipts. Poultry and egg operations are concentrated in the Fraser Valley (80%), contributing 17% of provincial farm cash receipts. Over 50% of annual production is consumed within the Greater Vancouver and Victoria area.

Current challenges arising from the single case of Bovine Spongiform Encephalopathy in Alberta and an outbreak of Avian Influenza in the Fraser Valley are discussed in the section Highlights of Events, Challenges and Opportunities.

Fruit, Vegetable and Field Crops and Nursery

Crops of major importance to BC agriculture in terms of annual value include floriculture and nursery, vegetables, tree fruits, and grains, berries and grapes, and oilseeds. Total crop receipts were over $1 billion in 2002 representing a 25% increase over the past 5 year-average.

Horticulture activity is found throughout the province. Southern interior valleys, principally the Okanagan, are well suited for the production of tree fruits and grapes. The cooler and wetter climate of the lower Fraser Valley and southern Vancouver Island favours berry crops and vegetables. Greenhouse crops, nursery products, mushrooms and other specialty crops are concentrated in the southwestern corner of the province.

Most of the province's grain, oilseeds and forage seeds are grown in the Peace River district in the northeastern section of the province although some grain is also produced in the Kootenay area in southeastern BC. The Peace River area is an extension of the prairie-like terrain of Alberta which is well-suited to grain and oilseed production.

The Lower Mainland area and to some extent south Vancouver Island produces much of British Columbia's vegetables, mushrooms, berries, floriculture, nursery crops and some apples due to the very rich soil and flat terrain of the Fraser River delta. The lower Fraser River area between Hope and Vancouver is considered to be among the most rich soil areas of Canada. The variety of crops grown in this region is great and contributes to producing value-added food products for many different tastes and markets around the world.

Food Processing

The BC food processing sector includes activities such as processing and storage, and distribution to wholesale, retail and export. The food industry is dominated by a large number of small and medium sized firms which allows the industry flexibility in responding to changing consumer tastes and preferences.

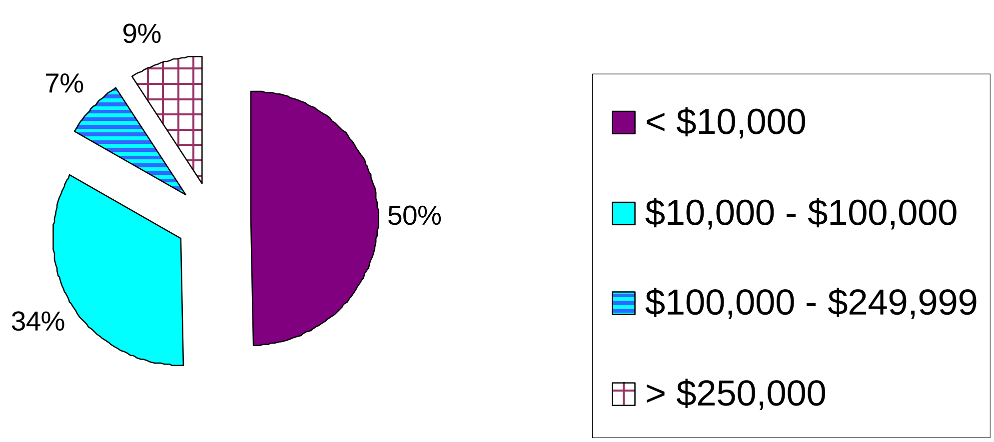
World trade is growing, and the mix is changing significantly from primary processing to more highly processed consumer oriented products. The dairy, meat and beverage sectors represent the largest share of total value of manufactured shipments of the British Columbia food industry. The value of food and beverage shipments increased by 28% over the last 10 years and provides an indication of the relative dynamism of the BC food processing sector.

The majority of food processors are located in close proximity to large population centres and raw material supplies. An estimated 55% of all food processing firms are located in the Greater Vancouver area including the Fraser Valley which is the source of poultry, dairy, vegetable and berry fruit production. Another 30% of food processing firms are located in the Okanagan Valley in proximity to tree fruit and grape production and in the coastal regions where fish is captured and farmed.

Number of Operations by Revenue Class as a Measure of Size

Approximately 50% of farms in BC have annual farm cash receipts of under $10,000; 34% have receipts between $10,000 and under $100,000; 7% between $100,000 and under $250,000 and 9% over $250,000 (see accompanying pie chart). For more than half the farms, in each category of receipts, close to 50% of sales are from livestock production. Beef and horse production are predominant in farms with gross receipts less than $250,000. Dairy is the most predominant in farms with over $250,000 in receipts at 27% of the total, followed by chicken production at 13% beef production at 11% and egg production at 8% Tree fruit (at 8%), other edible crops (at 19%) and hay and fodder (14%) are the main crops in the smallest farms with under $10,000 in gross receipts with non-edible crops (floriculture, nursery, sod and Christmas trees) making up 8% of farms. On the other hand, in the largest farms with over $250,000 in gross receipts, non-edible crops are 16%, berries and nuts 4%, field vegetables including potatoes 4% and all other edible crops 10%.

Number of Farms by Revenue Class
(2001 Census Data)



Value of the Industry in the BC Economy

Economic Contribution

The agri-food system in BC is a complex $22 billion chain employing over 280,000 people providing, equivalent to one in every seven jobs in the economy. Agriculture and related food processing together employ over 57,000 people. Food services employ 129,000, retail (including health foods) employ 67,000 and wholesale almost another 17,000. Other agriculture and related employers include floral and garden retail, transportation and storage and other support services.

The industry contributes $1.9 billion in expenditures on inputs by farmers, $2.2 billion in sales of agricultural products by producers, $5.3 billion in manufactured shipments of food and beverage products by processors, $2.5 billion in total exports to other countries, $2.2 billion in exports to other provinces and $17.2 billion in food sales to consumers in B.C. Farmers export over $660 million and processors export $1.8 billion of their total production.

Income taxes paid by BC farmers in 2000 exceeded $250 million. Agriculture and related processing alone contribute an estimated $3.3 billion to provincial economic activity or GDP.

Primary Agriculture Contribution

The majority (or 51 percent) of BC's $2.2 billion in farm cash receipts come from sales of livestock products. Crop receipts represent 48 percent of receipts and program receipts the remainder (or 1.0 percent).

The industry has shown sustained growth in the past decade. The total cash receipts of farmers have increased 59 percent, from $1.40 billion in 1992 to $2.23 billion in 2002. In the same period crop receipts have doubled and livestock receipts have expanded 42 percent.

Among the commodity sectors, in 2002, dairy was the most dominant, generating $369 million in cash receipts, followed by beef ($318 million), floriculture ($283 million) and poultry and eggs ($330 million). The fastest commodity growth in recent years has been in greenhouse vegetables, mainly tomatoes and sweet peppers, where receipts increased from $53 million in 1996 to $184 million in 2002, an increase of over $131 million (or 247 percent) in seven years. Sweet cherries, canola and blueberries have also shown growth of over 200% between 1993 and 2002. Floriculture and nursery combined were slightly above dairy sales on average for the five years 1998 to 2002.

In 2002, BC led the nation in the production of greenhouse peppers, sweet cherries, raspberries and cranberries, and the first three of these commodities each accounted for more than 55 percent of Canada's marketed production of the commodity. Among all the provinces, British Columbia ranked in the top two in the contribution of twelve of its farm commodities to national production.

According to the Farm Financial Survey of 2002, BC farms had an estimated total net worth of $7.19 billion in 2001, averaging $1.071 million per farm, the highest among the provinces.

Agri-food Processing Contribution

Food and beverage processors represent the second largest goods manufacturing industry in BC (based on value of shipments), and the second largest generator of economic activity among all manufacturing industries after the wood product manufacturing industry. In 2002, it contributed 12.3 percent to provincial manufacturing GDP (in terms of constant dollars), compared with 31 percent by the wood manufacturing industry and 11.3 percent by the paper manufacturing industry, the third largest.

The industry consists of just over 1,100 companies producing a wide range of products. The majority (77%) of these processors are small businesses with 20 employees or less. The industry employed 27,000 people in 2002, showing an increase of 800 jobs over 2001. In 2002, the BC food and beverage manufacturing industry generated $5.3 billion in shipments. This comprised $4.3 billion in shipments by the food industries and 990 million in shipments by the beverage industries.

These industries have steadily grown over the past decade to 2002. Shipments by the food industries have grown 34 percent and by the beverage industries 84 percent since 1991. Total BC agri-food manufacturing shipments have grown 42 percent.

The growth of the food processing industries has been driven by export markets. International exports of processed agri-food products have increased 34 percent since 1996 and currently account for 73 percent (or $1.8 billion) of total international and inter-provincial agri-food exports from the province.

Highlights of Events, Challenges and Opportunities

Strengthening Farming

Farming is a core activity in many communities and co-exists with other community activities. The Right to Farm system enables the Province to ensure that there is a proper balance between provincial objectives for the agriculture and aquaculture sectors and local government regulatory authority over these activities.

Amendments (the Agriculture, Food & Fisheries Statutes Amendment Act, 2003, enacted on October 21, 2003) clarify and better support the policy objectives of the Right to Farm system and ensure that the system applies effectively to all types of farming (including aquaculture).

The Agricultural Policy Framework Agreement

British Columbia has signed on to the Agricultural Policy Framework (APF) Agreement which brings almost $300 million to the province's agri-food efforts. The APF supports risk management, food safety and quality, environmental, renewal, and science and innovation programs.

Risk Management

Within the APF the province has succeeded in moving from two agricultural programs, the National Income Stabilization Agreement (NISA) and Whole Farm Income Program (WFIP), to one program, the Canadian Agricultural Income Stabilization (CAIS) Program. CAIS allowed the province to respond to the market collapse in the beef sector due to the BSE crisis. The new Production Insurance (replacing Crop Insurance) Program will be available to farmers as well, to offset losses due to catastrophic events, avoiding demand for government ad hoc payments. Both these programs will enable farmers to continue to manage income and production risks especially when losses are significant.

Challenges

During the last few years producers have been challenged by several major issues including drought and disease. The BC cattle industry suffered a severe blow with the discovery of a single case of Bovine Spongiform Encephalopathy (BSE) in Alberta in May of 2003 and a subsequent single case in Washington State in December 2003. Closure of the US border to Canadian cattle and also initially to bovine products wreaked havoc with the Canadian cattle market, the major impact being a drop in the price of all cattle and most significantly in the price of culled cows. The cattle industry is still adjusting to these impacts. Both the federal and provincial governments instituted BSE recovery and cull cow programs and further assistance is expected through the new CAIS Program.

More recently, the Fraser Valley poultry industry has been greatly affected by Avian Influenza, a contagious viral infection that can affect several species of food producing birds, pet birds and wild birds. Poultry industry and allied industries (feed, trucking, and mushrooms) are greatly affected. The federal government, through the Canadian Food Inspection Agency, will pay compensation for birds which have to be destroyed. Industry is concerned that production losses will be great. Alternatives are being investigated.

The availability of water for agriculture and other uses is becoming of increasing concern in British Columbia and around the world. Small changes in temperature and precipitation levels can have very deleterious effects on the volume of water available and even more critically for agriculture, the timing of this precipitation.

The Federal and Provincial governments are participating in a Regional Water Supply Expansion Program for British Columbia which will put $5.2 million into expansion over 3 years. This program will aid in the development of improved on-farm capacity for water storage, regional works which can be used for water on Crown land, and multi-user systems whereby several farmers can participate in a water project. In addition, there is a National Water Supply program which is aimed at providing water to farms by moving supplies away from areas which are easily polluted, e.g., watering stations away from streambeds. The Agricultural Policy Framework assists farmers in developing environmental farm plans which include identification of pollution problems or problems in riparian areas.

Emerging opportunities

Agriculture is increasingly branching out into other areas of opportunity in order to allow farmers to supplement their income. Such areas as agri-tourism are presently starting to spark interest. The Ministry is also involved in investigating alternative uses of crops and residues for use in bio-products. BC farmers are well known in Canada as being innovative in the fields of organic products and products for the health industry such as nutraceuticals.

Opportunities exist to create new travel experiences combining sightseeing, cuisine, farm-tours, cattle drives, winery tours, cultural events, historic places, special events and local community involvement. Local food growers and processors are forming new alliances and partnerships with tourism operators to capitalize on the growing demand for these unique travel experiences. Effective January 2004 the ministry established a strategic alliance with Tourism British Columbia to link to the broader tourism objectives of British Columbia Cuisine Tourism, Garden-Inspired Tourism and British Columbia Agritourism Alliance initiatives; and is building new alliances with key industry stakeholders to increase consumer awareness and stimulate demand for British Columbia food and beverage products.

Across Canada there is a growing interest in and commitment to the bio-based economy as a foundational element in Canada's future economic growth and development prospects. That perspective is supported by both industry and politicians looking to the future well-being of the country. The term bioproducts encompasses many specific products and industries, including: bioenergy and biofuels; biomaterials and composites; pharmaceuticals and bio-pharmaceuticals; functional foods; nutraceuticals; green chemicals; and other biotechnology products. Biofuels include ethanol, methanol and methane, and biomaterials include agricultural materials used to produce materials such as wall board, glues, and industrial pre-cursors to bio-degradable plastics.

British Columbia is quickly expanding in the Life Sciences sector and is responding by developing a focus on the agri-food related bio-products. The province will continue to partner with British Columbia industry to develop this sector in those areas where British Columbia has a competitive advantage and can develop sustainable and profitable industry sub-sectors. A number of ministries are involved in undertakings addressing this subject, including the Life Sciences Initiative.

Other Values of the Industry to the BC Public

Leaders in environmental stewardship

Before the APF came into being, the province had been working with industry and other levels of government to address environmental issues, through the Partnership Committee on Agriculture and the Environment. British Columbia was one of the first provinces to sign the APF agreement with the federal government, allowing the province to move forward in environmental planning. The agreement provides programs and funding to assist farmers across the province in protecting and enhancing the environment.

All farms in BC are being offered the opportunity to participate in environmental farm plans which will identify problem areas on the farm, such as manure management. As problems and solutions are identified, farmers and landowners will have access to expertise and funds to implement changes aimed at reducing nitrogen accumulation in soils and water, reducing erosion of agricultural soils, increasing carbon in soils, reducing agricultural green house gas emissions, and contributing to improved habitat availability, and thereby enhancing the natural environment. Targets have been set for each of these areas and the province is working in partnership with industry and the federal government to achieve these targets. This program is expected to be of great benefit to the health of the agricultural community and the health of the natural environment.

British Columbia MAFF, with cooperation from CFIA, WLAP and PEP and with the involvement of industry groups and individual farms, has responded to the Avian Influenza outbreak by developing a range of environmentally responsible disposal options for birds, litter and manure, that also meet the CFIA requirements to depopulate the Fraser Valley poultry population.

Role in carbon sequestration

Agriculture has been identified as a possible partial solution to the increasingly excess amounts of CO_2 in the atmosphere. Agricultural soils have the capacity to sequester carbon by fairly simple changes to agronomic practices, such as reduced or zero tillage. These practices involve less disturbance of the soil which encourages CO_2 to be stored in the soil by plants and plant material. Lands which are considered marginal for agriculture in BC would also benefit greatly from this practice. Recommendations within the APF actively encourage poor quality lands or lands which are susceptible to erosion to be converted to zero or no till, the reduction of summerfallow and increase of forage use in crop rotations. The Federal government also has a green plan which encourages marginal lands to be converted back to a more natural state, including agro forestry, and the use of windbreaks, shade trees, and tree fencing. Under the plan partial compensation will be made to farmers for loss of productivity.

Farms – habitat/green space

Environmental farm plans will identify areas which can be enhanced to provide suitable wildlife habitat. These plans will allow farmers to access Federal funds to partially pay for identified problems or areas of opportunity. It is expected that these plans and funds will be of great benefit to biodiversity, habitat and green space.

Ranching and biodiversity

Within land used for grazing, specific species are cultivated while others are suppressed. The natural habitat is changed but numerous species may benefit from the change. There has been displacement of some species by ranching; however other species, (such as deer and elk) have benefited greatly from the abundance of forage produced by ranchers. Biodiversity values can be retained over a broader land base even with the existence of ranching activities. Improvements in the value of wildlife habitat can be achieved with grazing as well as without grazing. Livestock can be used as a management tool to condition range forage to provide superior forage for wildlife and to expand forage supplies to adequately meet the joint needs of livestock and wildlife, currently undersupplied. Burrowing owls prefer grazed grasslands, long billed curlews and killdeers prefer mid seral stages moderately to heavily grazed, and bighorn sheep and elk greatly prefer grasslands previously grazed by livestock. However, Chinook salmon have been negatively impacted by livestock grazing in riparian areas, as well as by other human activities. The key issue in the compatibility of grazing and wildlife and fisheries values is in timing of grazing rather than purely the intensity. Specialized grazing systems may be needed to achieve wildlife biodiversity while getting cattle ranching value from Crown grazing lands. The Ministry has also contracted a leading authority on ranching and biodiversity to produce a report, which should be available for public distribution shortly.

Leaders in Food Safety

There is increasing concern, both domestically and internationally, about the safety and quality of food products in BC. The recent outbreak of avian influenza and the one case of mad cow disease has had devastating effects on our provincial and national economies. Consumer confidence needs to be maintained and strengthened. The ability of the industry and the province to address this issue in BC depends on being able to implement improved systems for food safety and quality and product tracking throughout the food system and being able to maintain systems for the early detection and control of plant and animal diseases and pests.

The ministry works proactively with the agriculture and fish sectors to promote the use of best management practices on farms including disease and pest management, waste management, weed control, and on-farm food safety and quality systems. The main goal is a food system that provides consumers and customers with confidence in the safety and quality of BC food, agriculture and seafood products while protecting the provincial agri-food industry, consumers and markets from food safety risks.

The goal of the APF is that by 2007 80% of farms in BC will have a HACC Plan in place. Because marketers and retailers have acknowledged the importance of these systems to their customers, many have established them before and more will move to adopt them in the near future.

Mini-Profiles of Some Prominent or Growing Sectors

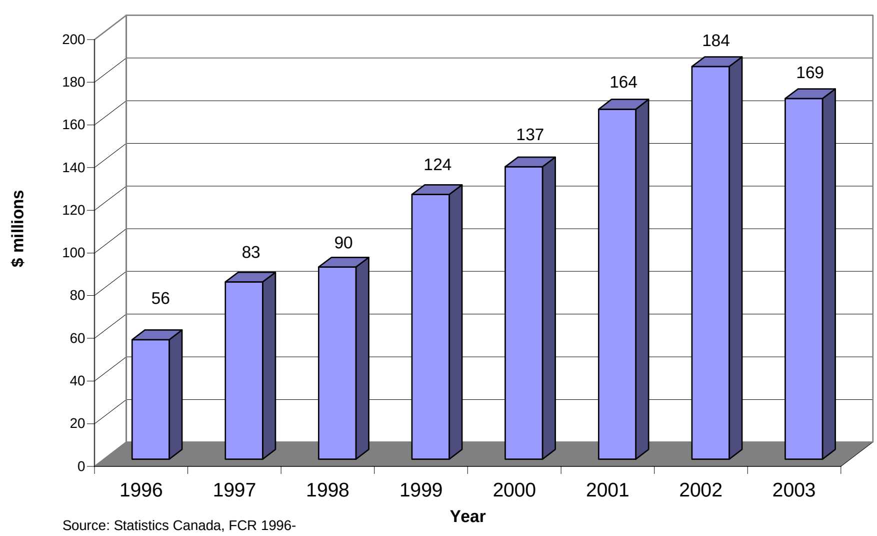
Greenhouse Vegetables

BC's greenhouse vegetable industry is a very successful sector of horticulture in the province. BC has become a leader in integrated pest management technology, and computerized climate control systems. This has allowed for the production of high-valued fresh market crops and the industry's ability to respond to consumer preferences.

The greenhouse industry is regulated by the *Natural Products Marketing (BC) Act*. The vegetable industry is regulated by the British Columbia Vegetable Scheme which is for the promotion and regulation in the Province of the production, transportation, packing, storage and marketing of the regulated product. There is no national supply management for the vegetable industry.

Due to a structured marketing system, growers are able to focus on growing rather than marketing. They are able to specialize in one crop rather than growing a wide range of crops. This specialization allows for improved quality and decreased costs of production.

Growth of BC Greenhouse Vegetable Farm Cash Receipts, 1996 - 2003p



Since 1996 the greenhouse industry has seen a rapid growth in sales, increasing from $56 million in 1996 to just under $190 million in 2002, an increase of 228 percent. This expansion is due in part to the greenhouse vegetable industry taking advantage of the growing demand for fresh vegetables, both domestically and for export through capital expansions, state of the art technology and well funded research. Combined these activities have led to BC's prominent world standing in the greenhouse vegetable industry.

Consumers want a wide range of foods, the best quality available, consistency of supply and value for their money. BC produces 56 percent of greenhouse peppers by value, 31 percent of greenhouse tomatoes and 14 percent of greenhouse cucumbers produced in Canada. This market share puts BC in a very strong market position.

Lately, however the industry has been challenged by lower prices, high energy and transportation costs, a rising dollar and increased competition. However because of its success in meeting past challenges, BC's greenhouse vegetable industry is expected to continue to grow, albeit at a slower pace than has been seen in the past few years.

Wineries

In British Columbia, grapes are grown in the Okanagan Valley, the Similkameen Valley, the Fraser Valley, and on Vancouver Island. Grape acreage was 2,406 acres in 1971. The industry replaced large acreages of less productive North American vines in the early 1990's with higher yielding and superior European rootstock. Harvested acreage was only 833 acres in 1996.

Of the 6,096 acres planted in 2001, wine grapes occupied about 5000 acres, and most are contracted to the many wineries in the valley and other areas. The total value of grapes produced for processing in 2001 was $21,203,000. 28 million lbs were crushed in that year, up from 16 million lbs in 1995. Some crop is purchased from the US by the larger wineries, implying that there is market room for further growth in the grape industry.

The British Columbia Wine Institute (BCWI) was created by an act of the provincial legislature in 1990. It functions as a component of a strategic plan developed by the industry and government to create an internationally competitive wine industry based on premium wine production. Early in its existence, the BCWI adopted the Vintners Quality Alliance (VQA) program as a cornerstone of its wine certification and marketing strategy. VQA defines and mandates standards for wine and certification, and provides market development support for premium wines produced by participating wineries.

Dairy, Poultry and Eggs

The dairy and major feather (chicken, turkey and eggs) industries operate within the supply management system. Over the five year period 1998-2002, these two industries occupied the second and third place ranking in terms of farm cash receipts, after floriculture and nursery, as shown in the accompanying table. They have provided a high level of stability to the agriculture sector and to rural communities. The recent Core Review found that the supply management system is affordable, effective, efficient, accountable and in the public interest. The goals of the recommendations established through this process are to provide a regulatory framework that will:

- Promote economic development;
- Ensure that the currently regulated commodities are flexible, responsive and well positioned to meet future challenges and opportunities; and
- Strengthen the boards and commissions, allowing them to operate more efficiently, effectively and independently.

The recent Avian Influenza outbreak has highlighted the importance of a strong industry infrastructure to rely on for government communication and consultation, industry decision-making and information sharing in times of crisis. The supply management system has provided industry with the means of responding more efficiently and effectively.

Commodities 1998-02 average	$ Mil.	
Floriculture & Nursery	356.2	**19%**
Dairy products	348.7	**19%**
Poultry & Eggs	314.9	**17%**
Cattle & Calves	307.3	**17%**
Vegetables	233.3	**13%**
Fruit	165.7	**9%**
Grains & Oilseeds	55.8	**3%**
Hogs	42.3	**2%**
Forest Products	22.2	**1%**
Misc (furs, wool, honey, sheep)	15.5	**1%**
Total	$1,862	