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INDUSTRY PROFILE

Industry, Science and Technology Canada
Industrie, Sciences et Technologie Canada

Fruit and Vegetable Processing

Canada

INDUSTRY PROFILE

FRUIT AND VEGETABLE PROCESSING

1988

FOREWORD

In a rapidly changing global trade environment, the international competitiveness of Canadian industry is the key to survival and growth. This Industry Profile is one of a series of papers which assess, in a summary form, the current competitiveness of Canada's industrial sectors, taking into account technological and other key factors, and changes anticipated under the Canada-U.S. Free Trade Agreement. Industry participants were consulted in the preparation of the papers.

The series is being published as steps are being taken to create the new Department of Industry, Science and Technology from the consolidation of the Department of Regional Industrial Expansion and the Ministry of State for Science and Technology. It is my intention that the series will be updated on a regular basis and continue to be a product of the new department. I sincerely hope that these profiles will be informative to those interested in Canadian industrial development and serve as a basis for discussion of industrial trends, prospects and strategic directions.

Robert de Cotret

Minister

Canada

1. Structure and Performance

Structure

The fruit and vegetable processing industry in Canada includes both canners (or preservers) and processors of frozen products. Canning operations account for about 75 percent of industry shipments and 70 percent of employment. Producers of frozen fruits and vegetables account for the remaining 25 percent of shipments and 30 percent of employment.

In 1985, the latest year for which total statistical data are available, the processing industry comprised some 180 firms with a total of 222 plants: 187 canning and 35 freezing operations. In total, processors shipped products worth $2.357 billion. Exports were valued at $178 million (7.6 percent of shipments) while imports stood at $702 million, representing 24.4 percent of the domestic market. Annual average employment was 17 287. The Canadian industry's domestic orientation is therefore evident.

The standard goods of the industry are considered to be products such as canned or packaged corn, peas, tomatoes and carrots, and canned apple and tomato juices. Many of the firms which are chiefly involved in fruit and vegetable processing also produce other value-added foods such as soups, sauces or frozen prepared meals. These may incorporate a combination of fruits, vegetables, poultry, eggs, dairy products, meat and flour.

In the fruit and vegetable processing industry, approximately 55 percent of manufacturers' shipments are accounted for by foreign-controlled enterprises. The high degree of foreign ownership is largely the result of the establishment by multinational enterprises (MNEs) of subsidiary businesses in Canada behind a tariff wall. The majority of well-known national brands are produced by subsidiaries of American MNEs and include Aylmer, Del Monte, Heinz, Campbell Soups, Swanson, Green Giant, Hunt Wesson, Gerber and Bicks.

Nationally distributed brands manufactured by major Canadian firms include McCain, York (Canada Packers), Cavendish Farms, E.D. Smith and Stokely Van Camp (Cobi). The vast majority of Canadian-owned firms tend to be small and regional. McCain is an obvious exception. It operates national plants and is a world-scale MNE.

The two sub-sectors of the fruit and vegetable processing industry are structured quite differently. Canning is dominated by a few major firms which operate chiefly in Ontario, close to sources of fresh supply. Ontario firms account for 65 percent of total canning shipments. There are also a large number of small and medium-sized canners which operate in most agricultural regions of Canada, often on a seasonal basis. Firms in British Columbia account for about eight percent of canning shipments; Quebec firms for some 18 percent.

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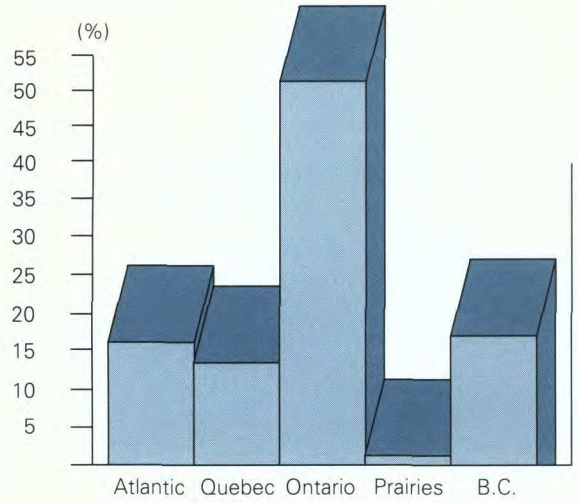


Employment by Region 1985
(Total 17 287)

The majority of the large canning companies are subsidiaries of U.S. multinationals, and generally produce brand-name products for the domestic market on a year-round basis. They benefit greatly from the marketing strength of parent companies and often possess a wide mix of products ranging from commodity-type goods to value-added packaged products. Some do both canning and freezing. The smaller regional processors tend to be packers of standard commodity-type goods. These plants often handle peak loads during the harvest season and then experience long periods of under-utilization or temporary closure.

The canning sub-sector is considered to be concentrated, as only seven percent of the total number of firms account for 45 percent of industry shipments.

Firms in the smaller frozen fruit and vegetable sub-sector tend to be domestically owned, with some of the larger operations more widely distributed over the geographic regions of Canada. The sub-sector is highly concentrated, as the four largest firms control about 75 percent of shipments.

Ontario is the location of 40 percent of the processors of frozen products, which contribute about 30 percent to the total value of shipments. Atlantic Canada has 11 percent of establishments and about 40 percent of shipments, while British Columbia and Quebec account for 13 percent and two percent of shipments respectively.

Many freezing plants operate on scales which make them competitive with regionally based U.S. firms. However, by contrast, none are as big as the few major Canadian canning operations. Freezing operations are generally more modern than canning plants and are structured so as to process a diversified range of local fruit and vegetable products, imported fruit juice concentrates and ready-to-serve complete meals. Their capacity is thus more evenly utilized year-round.

To a large extent, the structure and performance of the entire Canadian processing industry is influenced by the limits on agricultural production due to climate, as well as by the public policy of maintaining produce marketing boards. Marketing boards exist for all of the major commodities and operate under provincial authority. The performance of fruit and vegetable processors is strongly influenced by the availability and price of Canadian agricultural products. At the same time, both the canning and freezing segments of the industry also manufacture a wide range of products by using imported produce or semi-processed products. However, this strong reliance on domestic horticultural crops imposes a distinct seasonal pattern of activity on many processing operations.

Employment in the industry is concentrated in small and medium-sized population centres, usually close to sources of fresh supply so that a high-quality product is assured. For this reason, these businesses are highly important to the welfare of their local economies. Because employment in some parts of the industry is also highly seasonal, labour shortages are a common problem in periods of peak activity. During such times, the number of production workers in the total sector can double the yearly average.

Several of the larger processors have attempted to develop close links to sources of raw materials. These firms have, at various times, pursued strategies of corporate ownership of farms and direct contracting with growers as well as the manufacture of metal containers for internal use. Manufacture of metal cans began in the early 1960s, but high capital costs limited such captive operations to the four or five largest processors. All of these companies have recently divested themselves of their can-making operations.

Performance

Although the nominal value of processed fruit and vegetable shipments increased by some 52 percent between 1980 and 1985 (from $1.554 billion to $2.357 billion), overall shipments, expressed in constant 1981 dollars, rose by only about seven percent. Demand for processed products has fallen over the past 10 years in relative terms because of consumer preferences for fresh fruit and vegetables.

Both canners and freezers have lost ground to the fresh market. Data for the most recent 10-year period indicate that annual per capita consumption of fresh produce has increased by 18 percent between 1974 and 1984. Per capita consumption of canned and frozen goods has decreased by three percent over this same 10-year period.

There is also an intra-industry movement from canned goods to frozen goods, which are considered fresher. Canadian production of canned fruits and vegetables has decreased by 10.5 percent in the last 10 years and is currently estimated to be falling at a rate of three percent per year. However, frozen foods have increased their share from 19 percent of total shipments in 1973 to about 25.5 percent of the 1985 value of shipments.

As a result of the internal shift from canning to freezing, total employment has generally remained stable over the past eight years, at an average level of about 17 313 persons. Between 1980 and 1985, employment in the freezing operations grew from 4003 to 5086 while canning factory jobs declined from 13 567 to 12 201. In 1980, there were 33 freezing plants and 199 canning plants. By 1985, freezing operations had increased to 35 while canning plants had declined to 187.

The processed fruit and vegetable industry historically has experienced a large trade deficit, primarily because of consumer demand for a wide range of products made from produce that cannot be grown in Canada's climate. However, an offsetting feature is the fact that some of these goods are often imported for further processing. In these cases, value is added for the Canadian market and in some instances, such as juices, for both domestic and export markets. However, imports of some low-cost standard commodity goods have also put pressure on some segments of the Canadian industry. A prime example is canned tomato products.

Exports have accounted for between eight and nine percent of industry shipments since 1982. This total represents an increase over the previous 10-year average level, which was only 5.2 percent. The impetus for the increase is the strong performance of frozen potato products, as well as frozen and canned corn and fruit juices exported to the U.S. market. Total exports reached a level of $208 million in 1986, 27 percent of which were directed to the European Community (E.C.) and 50 percent to the United States.

On the other hand, 1986 imports were valued at $693 million, 42 percent from the United States. This total represents about 23 percent of the Canadian market. Major import items are frozen orange and other juice concentrates, canned mushrooms, canned tomatoes and tomato paste.

2. Strengths and Weaknesses

Structural Factors

The major structural influences on the industry include the presence of marketing boards, transportation costs, plant size and local growing conditions.

The processing industry is estimated to account for about 40 percent of the total domestic production of fruit and vegetables. Marketing boards tend to raise input prices to the processing industry while offering the benefit of stabilizing the supply of fresh raw produce. To a large extent, the boards and processors recognize their long-term interdependence, and reasonable rates and supply conditions are established. Nonetheless, on average, the contract prices negotiated between the boards and the processors are often higher than those paid for equivalent U.S. produce by U.S. processors.

Certain raw material ingredients currently give Canadian products a cost advantage over some U.S.-processed products, largely because of domestic policy differences. For example, American sugar prices are held artificially high to encourage local growers of cane and sugar beets. This U.S. policy normally gives Canadian industrial sugar users some small cost advantage.

Data which compare Canadian and U.S. canning operations, consistently reveal that U.S. labour productivity is higher by about 10 percent. A good part of the difference relates to the larger scale of U.S. plants. Productivity improvement in segments of the Canadian industry has also been restrained by generally low levels of new investment in plants and equipment. The slowness in modernizing canning operations partly stems from the declining demand for canned goods. Labour productivity is also lower among Canadian frozen food processors when compared to their U.S. counterparts, although the difference is smaller than in the canning sector, possibly because Canadian freezing operations are also relatively large and modern and operate year-round. Significant investments in new technologies have recently been made by a number of successful Canadian frozen food processors.

The practical limitations to transporting finished goods play a role in determining marketing patterns in the industry. In most cases, canned fruit and vegetable products are much easier and less expensive to ship long distances than are frozen products. This difference makes the climatic and production-cost advantages of our major competitors more significant for Canadian firms in the canned fruit and vegetable sub-sector than in the frozen processed food sub-sector.

On the other hand, frozen products are relatively more expensive to ship long distances because of the high cost of constant refrigeration. This fact has given a margin of protection to Canadian frozen fruit and vegetable producers from competitors in the southern and western United States who have both an advantageous growing climate and lower average production costs. Eastern Canadian manufacturers of frozen vegetable products can therefore compete with U.S. firms in the populated northeastern U.S. market.

Trade-related Factors

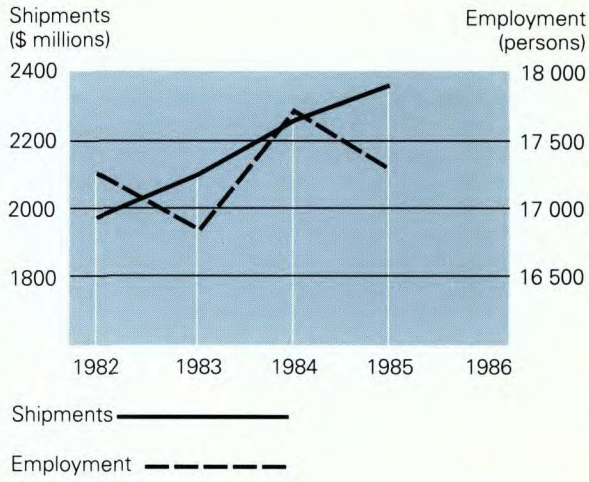
Because the industry is closely allied to agricultural production, there is a wide variety of tariffs applied to the international trading of processed fruit and vegetable products. These range from duty-free to more than 20 percent in Canada. In general, Canadian GATT-bound (1987) rates are about the same as U.S. tariffs (in the 10 to 15 percent range), but are lower than E.C. and Japanese rates (15 to 30 percent).

Technical standards and regulations are common in processed goods and generally can have a major impact on trade. Many industrialized countries develop import regulations dealing with health concerns or standards for imported processed products. Regulations normally deal with product composition, purity, quality, container sizes or labelling. Local standards are often not met easily by exporters and, in many cases, can have the added effect of limiting competition from imports.

Canada, the United States, Japan, Australia and the E.C. all adopt measures to protect most of their domestic agricultural producers from imports by imposing seasonal tariffs of 10 to 15 percent during the harvest period. To protect growers, Canadian seasonal tariffs are coupled with regulations restricting imports of fresh or semi-processed products in non-standard (i.e., bulk-shipment) containers (the *Canada Agricultural Products Act*).

Under the Canada-U.S. Free Trade Agreement (FTA), all agriculture-related tariffs (for semi-processed, processed and fresh) will be eliminated in equal steps over 10 years. For fresh fruits and vegetables, however, the FTA includes a 20-year "snapback" provision which could temporarily restore the tariff up to the Most Favoured Nation (MFN) level under defined "depressed-price conditions." Bulk imports of fruits and vegetables for processing will remain subject to regulation under the *Canada Agricultural Products Act*, as discussed above.

Both countries have agreed to consult on agricultural issues semi-annually and at such other times as mutually agreed. This agreement formalizes the ad hoc consultations that have been occurring.



Total Shipments and Employment

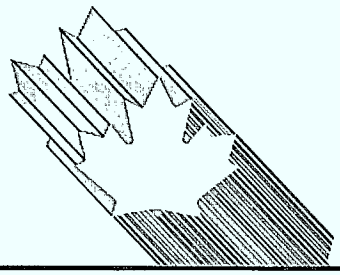
Canada and the United States retain their GATT rights and obligations with respect to issues not otherwise provided for in this Agreement. The value of this for Canada is that the government retains its flexibility for domestic policy formulation. For example, the FTA does not prevent Canada from adding, subject to GATT rules, products to the Import Control List, should such action be necessary to preserve the integrity of supply management systems.

The parties have also agreed to work towards minimizing technical barriers for food and beverages. This effort will call on the co-operation of regulatory authorities in both countries to harmonize technical regulations which may now interfere with trade, while continuing to protect human, animal and plant health.

Technological Factors

In general, canning operations employ readily available and established technology. They emphasize high through-put of end products that require little special handling for storage or transport. Freezing operations are generally more sophisticated and use new machinery and equipment considered to be as technically efficient, as for U.S. or European counterparts.

Subsidiaries of multinational enterprises (MNEs) generally do not perform a significant amount of research and development in Canada; but, because of their close ties to sophisticated parent firms, they have easy access to state-of-the-art industry innovations and new products. The current forms of technological change in the industry are in new packaging and related machinery, efficient process control systems and new product formulations.



The increased use of aluminum, plastic laminates or metalized films as packaging materials has been in response to the consumer preference for a combination of long life and fresher foods. New packaging is generally developed elsewhere, then adapted to Canadian products. Recent examples include the widespread use of aseptic or gas-flushed packaging, which has contributed to long shelf life for a wide range of otherwise perishable goods. Products that take advantage of the new technology, as well as contemporary trends in eating habits, include aseptically packed fruit juices; gas-flush-packed chilled foods such as salads and individually portioned complete meals that can be conveniently prepared in a microwave oven.

Canadian fruit and vegetable processors are adopting these technologies and moving some of their production into these value-added products at least as rapidly as U.S. firms, but they are still behind Japanese and European food processors. In fact, the Canadian industry has, in some cases, adopted new technologies ahead of the United States because its smaller production scales make initial conversion easier.

3. Evolving Environment

On balance, future growth in the domestic market is expected to correspond to the rate of population expansion. Frozen foods have, however, experienced a much higher growth rate than the industry average over the past decade. Consumption of fresh produce will continue to erode market shares of both sub-sectors, but will cause a sharper decline in the production of canned goods. The trend to fresher products and convenience goods will probably enable frozen (and emerging chilled food) operations to expand while contributing to the further decline of traditional canning.

The technology for freezing foods was introduced in the 1930s, but frozen foods have only become widely popular with consumers over the past 30 years. The advent of cheap, reliable freezing technology and expanded store freezer space has played a big role in this transformation, as has the consumer preference for frozen goods. Freezing operations are capable of processing raw produce with very little change in the original taste or texture of the goods; the result is a product with a "fresh" image.

The development and use of new packaging has improved the quality and convenience of some non-frozen packaged products. These techniques will improve the market outlook for select segments of the traditional canning industry through such new-look products as fruit juices or solid vegetables and soups in aseptic packages. Fruit and vegetable juices, already packed this way, are being considered increasingly as viable substitutes for such traditional beverages as soft drinks.

Because prices for fruits and vegetables are traditionally higher in Canada, under the FTA, growers will have to become more efficient to meet competition and maintain this market. It is expected that the close relationship between growers (marketing boards) and producers will persist, and that Canadian raw material prices will be sufficiently competitive for producers to retain their domestic markets.

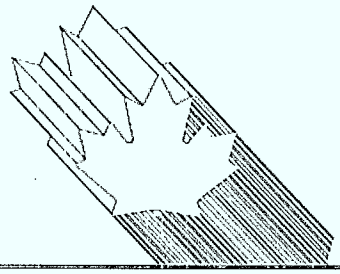
Under the FTA, it is expected that the cost of some imported chemical food additives, as well as packaging costs, will decrease as tariffs are removed.

4. Competitiveness Assessment

Under current conditions, Canadian canning operations are experiencing a contraction in the domestic market through the loss of market share to the growing popularity and availability of fresh and frozen fruits and vegetables.

Because of the relatively higher cost structure and smaller scale of operations in Canada, the canning sub-sector currently maintains its competitive position in the domestic market with the assistance of tariff protection. The FTA is likely to put pressure on this sub-sector, particularly for small and medium-sized producers of strictly commodity-type products such as canned beans, peas and tomatoes. Multinationals will have the option to source commodity goods from their (normally) low-cost U.S. plants and import products from U.S. plants for sale here under their brand names; alternatively, they can pursue product-line specialization for the North American market in their Canadian operations. The FTA may also put pressure on smaller firms to move out of standard goods and into more specialized products for a continental market.

Plants producing frozen fruit and vegetable products are generally as efficient as their U.S. competitors. High transportation costs for frozen products and the short shelf life of chilled products will provide a measure of protection for domestic markets. Strong North American demand for frozen products, coupled with the removal of tariffs under the FTA, is expected to fuel growth in this sub-sector if agricultural input prices remain in line with those of U.S. competitors. Some Canadian frozen corn and potato products should be even more competitive in the northeastern United States.



The outlook is less clear for the manufacture of further-processed, value-added products such as prepared meals. The future of these will vary according to their cost competitiveness on the basis of ability to source competitively priced inputs, the individual production strengths and weaknesses of companies, as well as emerging continental (north-south) competition. Again, many of these producers are MNE affiliates with the flexibility to drop unprofitable product lines and replace plant capacity with existing international brand-name products in order to maximize the use of assets. The decisions will be predicated on cost comparisons between their North American plants.

In summary, the market for canned goods is likely to continue to be negatively affected by the consumer preference for fresh fruits and vegetables. While this trend has already resulted in significant consolidation and rationalization among canners, changes arising from the FTA are likely to result in further contraction in the production of price-sensitive, commodity-type goods. The effect of the agreement on frozen operations, on the other hand, is expected to be generally neutral, and in some cases positive, on the basis of existing Canadian production strengths. Finally, the outlook for value-added, formulated goods remains to be decided, and will be largely influenced by the manner in which MNE firms evaluate their options for operating in the North American market.

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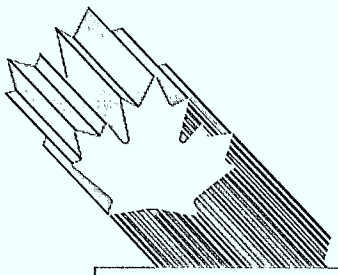

FRUIT AND VEGETABLE PROCESSING

PRINCIPAL STATISTICS

SIC(s) COVERED: 103 ((1980))

	1973	1982	1983	1984	1985	1986
Establishments	241	213	217	224	222	N/A
Employment	18 886	17 256	16 796	17 728	17 287	N/A
Shipments ($ millions)	716	1 977	2 103	2 259	2 357	N/A
Gross domestic product (constant 1981 $ millions)	509.1	514.4	577.0	634.7	531.5	N/A
Investment ($ millions)	N/A	112.9	124.5	127.6	152.9	183.8

TRADE STATISTICS

	1973	1982	1983	1984	1985	1986
Exports ($ millions)	44	179	164	186	178	208
Domestic shipments ($ millions)	672	1 798	1 939	2 073	2 179	N/A
Imports ($ millions)	207	618	595	706	702	693
Canadian market ($ millions)	879	2 416	2 534	2 779	2 881	N/A
Exports as % of shipments	6.1	9.1	7.8	8.2	7.6	N/A
Imports as % of domestic market	23.5	25.6	23.5	25.4	24.4	N/A

Source of imports (% of total value)		U.S.	E.C.	Asia	Others
	1982	49	10	5	36
	1983	49	7	5	39
	1984	45	7	5	43
	1985	43	5	5	47
	1986	42	7	5	46

Destination of exports (% of total value)		U.S.	E.C.	Asia	Others
	1982	27	46	7	20
	1983	40	33	6	21
	1984	40	34	6	20
	1985	50	26	5	19
	1986	50	27	6	17

REGIONAL DISTRIBUTION — Average over the last 3 years

	Atlantic	Quebec	Ontario	Prairies	B.C.
Establishments – % of total	8.9	24.8	48.1	1.0	17.2
Employment – % of total	16.1	13.1	52.2	1.5	17.0
Shipments – % of total	12.6	13.9	55.3	1.5	16.9

(continued)

MAJOR FIRMS

Name	Ownership	Location of Major Plants
Campbell Soup Company Limited	American	Wolfville, Nova Scotia Montréal, Quebec Toronto, Ontario Listowel, Ontario Chatham, Ontario St. Mary's, Ontario Portage la Prairie, Manitoba
H.J. Heinz Company of Canada Ltd.	American	Leamington, Ontario Bramalea, Ontario
Nabisco Canada Limited	American	St. Davids, Ontario Leamington, Ontario Simcoe, Ontario Exeter, Ontario Chambly, Quebec Ste-Thérèse, Quebec
Pillsbury Canada Limited	American	Ste-Martine, Quebec Tecumseh, Ontario London, Ontario
McCain Foods Limited	Canadian	Grand Falls, New Brunswick Florenceville, New Brunswick Calgary, Alberta Portage la Prairie, Manitoba Toronto, Ontario
Cobi Foods Inc.	Canadian	Berwick, Nova Scotia Central Bedeque, Prince Edward Island Whitby, Ontario
Canada Packers Inc.	Canadian	Lethbridge, Alberta Brantford, Ontario
Cavendish Farms Division of Irving Pulp & Paper Ltd.	Canadian	New Annan, Prince Edward Island Charlottetown, Prince Edward Island Springhill, Nova Scotia
E.D. Smith & Sons Limited	Canadian	Simcoe, Ontario Winona, Ontario
FBI Foods Ltd.	Canadian	Mont St-Hilaire, Quebec Trenton, Ontario Montréal, Quebec

N/A – Not available

Note: Statistics Canada data have been used in preparing this profile.

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