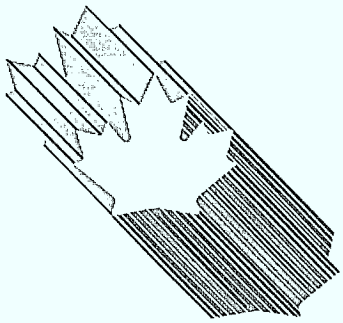
INDUSTRY PROFILE

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

Cane and Beet Sugar Processors

Canada



INDUSTRY PROFILE

CANE AND BEET SUGAR PROCESSORS

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.

Minister

1. Structure and Performance

Structure

The Canadian sugar processing industry includes both sugar cane refineries and sugar beet processors. Raw cane sugar, imported in a semi-processed form, requires only further purification and refining. Sugar beets are sliced and pulped to derive the raw sugar, but the process thereafter is essentially the same as that of refining raw cane sugar, with water and impurities from the raw products removed through the use of centrifugal separators and heat dryers.

Products of the industry include refined granulated white sugar, brown sugar and liquid invert sugar. Cane refineries account for some 90 percent of Canadian production. Sugar beet operations account for the remaining 10 percent. Beet sugar companies process locally grown produce and, due to the nature of their operations, make two major co-products: pulp and molasses. For technical reasons beet processors do not produce brown sugar. Individual plants refine either cane or beet sugar, but not both.

In 1986, industry shipments were valued at $466 million and employment stood at 1915. Exports were $47.9 million (8.2 percent of the volume of shipments), while imports of $41 million represented 11.3 percent of the domestic market, again on a volume basis. Almost all Canadian imports and exports occur with the United States. About two thirds of total domestic production is sold to industrial users and the most significant of these markets include soft drink manufacturers, chocolate confectioners, fruit and vegetable processors and miscellaneous food processors.

The industry is highly concentrated. Three major companies produce nearly 100 percent of the sugar refined in Canada: Lantic Sugar Limited, Redpath Sugars, and B.C. Sugar Refinery Limited. The industry is about 85 percent Canadian-owned, with the only major foreign interest being a 50.4 percent share of Redpath Sugars held by the multinational Tate and Lyle Co. of the United Kingdom. The Canadian Redpath company also operates both cane and beet refineries in the United States.

The industry consists of seven major plants. Five are dedicated to refining cane sugar, while two produce only refined beet sugar. Lantic, the largest of the producers, operates three plants in Saint John, Montreal and Oshawa which account for about 45 percent of Canada's production. Redpath and B.C. Sugar have cane operations located in Toronto and Vancouver, respectively. The two installations producing beet sugar are owned by B.C. Sugar and are located in Taber, Alberta, and Winnipeg.

Raw sugar is one of the most widely traded agricultural commodities in the world, with such industrialized nations (and major sugar producers) as the United States, the Soviet Union and the European Community (E.C.) purchasing large quantities of semi-processed raw materials from Third World countries, often as part of barter or foreign aid arrangements. Consumers in the Western world prefer sugar in a more purified and refined form, or in liquid form as an input to manufacturing. For this reason, a large refining capacity has developed in the industrialized Western nations.

Canada

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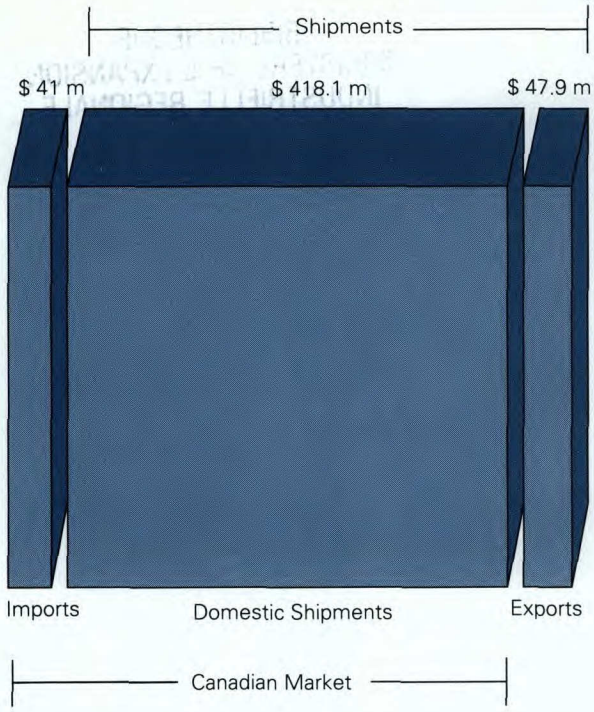


Imports, Exports and Domestic Shipments 1986

World transactions in the trade of sugar are characterized by a high degree of government intervention. About 85 percent of total international trade in raw and refined sugar is subject to bilateral agreements, government-to-government transactions or other special trade arrangements. The remaining sugar is sold on an open market which is, therefore, residual in nature as the market trades only about 15 percent of total world production. Canadian refineries buy their sugar on the open market.

Domestic subsidies, price support mechanisms and import quotas are common, and exist in the E.C. and the United States for, among other reasons, protection of domestic growers of sugar beets and cane. Thus, only about two percent of total world sugar consumption actually occurs at prices which closely relate to the world open market price. Because the beet sugar produced in Canada is only a fraction of domestic consumption, Canada purchases raw sugar at world market prices for refining and resale at corresponding levels.

The refined sugar industry faces increasing competition from alternative sweeteners, including corn-based and low-calorie sweeteners, based on price or consumer preference.

Performance

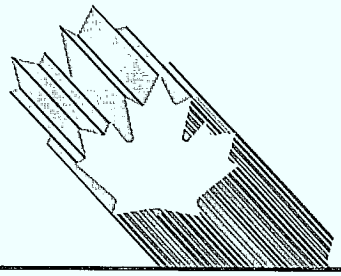
The performance of firms in this sector is mainly influenced by large fluctuations in the world price of raw sugar, the disruptive impact of low-priced imports of refined sugar, the ability to achieve high rates of capacity utilization in their plants, and the industry use of alternative sweeteners. High fructose corn syrup (HFCS) is a viable substitute for liquid sugar and, depending upon price, presents a competitive threat.

In the last decade, the industry has undergone substantial structural changes resulting from acquisitions or mergers. In part, these consolidations can be attributed to the flat domestic market and increasing competition from alternative sweeteners. This has resulted in one plant closure and the more efficient use of existing plants. Employment has declined from 2338 in 1982 to 1915 in 1986 due to consolidations, as well as the modernization and replacement of equipment requiring less labour. There is a continuing need for greater plant efficiency and capacity reduction.

The value of industry shipments can vary dramatically as a result of changes in world sugar prices. For example, the 1986 value of shipments was 28 percent below the 1980 value, but volumes were virtually the same. This difference can be attributed to the fact that in 1980 the world price of raw and refined sugar was at a high point. Canadian production has, in fact, been stable over the last two decades, fluctuating around the one million tonne level annually. Five- to ten-year cycles of low world market prices have typically been interrupted by periods of dramatic short-term high prices. This cyclical behavior is typical of many agricultural commodities that are influenced by weather and world economic conditions. However, because of the residual nature of the open world market, and the more pronounced effect of shortages, sugar prices are particularly volatile.

Until 1983, Canadian refiners traditionally supplied about 98 percent of domestic demand and enjoyed a positive balance of trade in refined sugars. However, beginning in 1983, refined sugar imports (chiefly from the United States) rose from 0.8 percent to reach a level of about 12 percent, by volume, of the domestic market in 1986. Much of this increase has been fuelled by changes in U.S. policy which have encouraged exports of refined sugars at low prices. Recent figures indicate that the rising trend is continuing.

In 1986, the average value of all Canadian shipments was $475 per tonne, while imports averaged $334 per tonne.



The minor quantity of refined sugar that can be exported to the United States from Canada under the U.S. country-by-country sugar quota established in 1982 has declined from 30 000 short tons in 1982 to 7 800 short tons in 1988, as the U.S. market has become more self-sufficient. However, Canadian firms have been able to export refined sugar blends under a separate quota for sugar-containing products. Canadian exports in 1986 totalled 87 738 tonnes, of which over 96 percent was shipped to the United States.

Capacity utilization is also a key indicator of performance. Through-put capacity is estimated to be about 1 135 000 metric tonnes; the most recent year when the industry operated at near full-capacity utilization was 1984. At that time, through-put was nearly 95 percent, due to strong exports to the United States and relatively low import penetration. Since then, exports of sugar and certain sugar-containing products to the United States have levelled off, while imports more than tripled. Capacity utilization rates in 1987 have dropped off to an estimated 85 percent. A small amount of this excess capacity is probably due to competition from alternative sweeteners. For example, the Canadian market for liquid sugar is easily lost to high-fructose corn syrup (HFCS), a liquid sweetener, when sugar reaches a critical high-price point relative to the cost of production of HFCS, unless export prices to the United States for HFCS are high enough to divert supplies.

According to a study commissioned for the Canadian Sugar Institute, the ability to gain a satisfactory return on investment is highly dependent on the long-term price of raw sugar. The study demonstrates that returns are satisfactory when the long-term differential between raw and refined sugar is in the range of US7¢ to 10¢ per pound. Over the past decade, Canadian refiners have generally operated within this range, although in the last three years low-priced U.S. imports have adversely affected profits.

2. Strengths and Weaknesses

Structural Factors

Since the world sugar industry is highly influenced by government policies which are designed to promote and protect local sugar producers and refiners, the competitiveness of Canadian refiners can only be examined in the context of the domestic market. Within the Canadian market, competition arises from low-priced imports from the United States and from alternative sweeteners such as HFCS or artificial, low-calorie sweeteners like "aspartame." The latter will continue to have a major impact on sugar industries in all developed countries.

Canadian efforts to increase exports have met with only limited success in view of trade barriers imposed by other governments.

High transport costs relative to the selling price of sugar are also a factor limiting the scope for marketing over long distances. For this reason, Canadian cane sugar refiners locate near ports to facilitate raw sugar imports, and close to major markets to lessen domestic transportation costs. The two beet sugar factories operating in western Canada source from locally grown produce and have a natural freight cost advantage in supplying the western provinces. However, domestic sugar beets encounter difficulty in competing with imported raw cane sugar when world cane sugar prices are low, as is currently the case, because the cost of beet production is higher.

The Canadian refining industry is as technically efficient as any in the world. The fact that Canadian cane refiners buy their raw sugar on the open market has resulted in lower average refined sugar prices in Canada than in most other industrial nations. Other countries have chosen to support local growers of cane or sugar beets by maintaining artificially high domestic refined sugar prices. As a consequence, Canadian industrial sugar users have benefited from lower average prices for their sugar inputs which contribute to their competitive ability in a variety of value-added, sugar-containing products. There have, however, also been brief disruptive periods of very costly sugar.

Trade-related Factors

Tariffs on refined sugar in Canada are among the lowest in the world at $24.69 per tonne, or less than 3¢ per kilogram. In the United States, the duty rate on refined sugar is somewhat higher, at about C4.6¢ per kilogram.

Similar tariff rates apply to the importation of raw sugars from countries entitled to Most Favoured Nation (MFN) treatment. Raw sugar is, however, duty free when imported from countries receiving the British Preferential Tariff (BPT). Australia is the major supplier to Canada. The BPT countries tend to price up to about three quarters of the MFN tariff on exports to Canada.

Non-tariff barriers are a more serious impediment to trade in this sector. In order to support a policy of maintaining a high domestic price for sugar, the U.S. government has, over time, imposed a variety of tariffs, fees and quotas on lower-priced imports. In 1982, the United States set country-by-country quotas on raw and refined sugar imports. Canada was allocated a minor 1.1 percent of the global total. In addition, the United States has followed a persistent policy, through such instruments as the Re-export Program for Refined Sugar, of encouraging exports in order to maintain a high rate of capacity utilization in the industry. Low-priced imports utilizing this program have had a negative impact on the refining industry in Canada.

The Canada-U.S. Free Trade Agreement (FTA) provides for the elimination of tariffs on sugar over a 10-year period. In addition, a relevant article deals with the closely related category of sugar-containing products. The United States agreed to exempt Canada from any potential restrictions it may choose to place on products containing 10 percent or less sugar, by weight. However, the United States retains the ability to add further restrictions in the class of products containing 'greater than 10 percent' sugar.

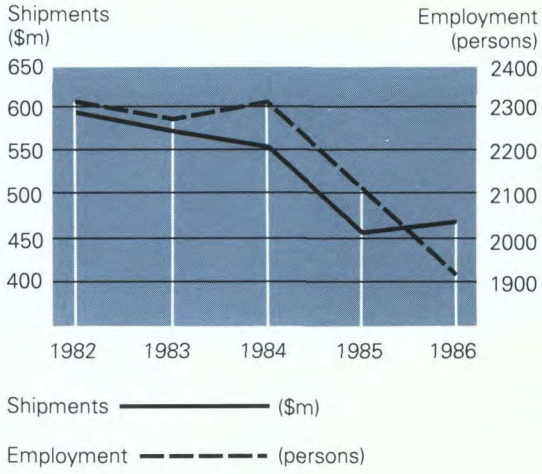
Technological Factors

Most Canadian refining operations have been in existence for years, but they are technologically efficient. In recent years, competition from alternative sweeteners has been the motive behind a number of sugar plant modernizations. Several Canadian plants have strengthened their efficiency and competitiveness through the implementation of process control systems, modern packaging systems and more sophisticated handling of bulk materials. Lantic Sugar Limited has plans to modernize its plants in Montreal and Saint John and, in 1987, it announced a planned expenditure of $20 million for these projects.

Other Factors

Canada has no special support programs for sugar refiners. However, a recent tripartite arrangement has been reached to stabilize beet growers' incomes. In 1987, the federal government announced a cost-shared stabilization program with beet growers and the provinces of Alberta and Manitoba. The program is expected to overcome the problems associated with large fluctuations in world prices by setting a support price for beets equal to 75 percent of the established cost of production and adding a fixed amount for profit.

In the past, a global body, the International Sugar Organization (ISO), of which Canada is a member, attempted to stabilize world sugar prices through a series of quotas and arrangements for holding and releasing reserve stocks amongst its members. This mechanism was not successful in containing price fluctuations within the target range, and the efforts to match supply and demand were discontinued in 1984. A new agreement provides a forum for reviewing statistics and for examining the re-negotiation or extension of the accord.



Total Shipments and Employment

3. Evolving Environment

The apparent per capita consumption of sugar in 1986 has decreased marginally from that of 1970. A number of factors contributed to the flat market for domestic sugar. First, the proportion of children in the overall population is decreasing, and this group is a major consumer of sugar. Sugar is considered to have a low income-elasticity of demand and, as incomes rise, the demand for sugar stays much the same. As the Canadian population ages, concerns about health and nutrition rise and intake of sugar, a high-calorie food, is reduced. Competition from HFCS and artificial low-caloric sweeteners for industrial usage is expected to continue.

Given the flat market for sugar, coupled with the development of alternative sweeteners, the sugar industry is vulnerable to loss of its traditional share of the sweetener market. In the United States, where sugar prices are artificially high, HFCS has been competitive with cane and beet sugar, and has now captured about 50 percent of the traditional industrial sugar market, including almost all of the soft drink market. HFCS is primarily a liquid sugar and is lower in sweetness. It has other technical differences which will impede full penetration of traditional sugar markets. In Canada, HFCS penetration has so far been limited because it is typically more expensive than sugar. It is expected, however, that once food and beverage processors convert to using alternative sweeteners, these traditional sugar markets will be lost unless sugar reverts to a significantly lower price level.

A corresponding pattern to that in the United States is likely to take place in Canada should the world price move significantly upward, as current predictions suggest. At present, Canadian HFCS plants export most of their production to the United States, where it is competitive due to the high floor price of competing sugar.

The elimination of sugar tariffs under the FTA is expected to have little direct impact on bilateral trade flows given that U.S. sugar policy remains unchanged. As noted earlier, other U.S. non-tariff barriers and export support measures are, and will continue to be, far more important considerations for the Canadian industry.

4. Competitiveness Assessment

The Canadian industry is domestically focused and a price-taker for its raw material. In comparing the cost of refining raw sugar with other world producers, the Canadian sugar processing industry is probably as technically efficient as any in the world.

As noted above, the domestic market is in the process of adjusting to the increased use of alternative sweeteners, a significant competitive consideration.

As long as sugar continues to hold a price advantage over other caloric sweeteners in Canada, it is likely to retain its traditional market share. However, the threat of low-priced refined sugar imports from U.S. sources continues, and with the price of raw sugar predicted to rise significantly in the near future, sugar may lose substantial market share to substitutes. Low-caloric sweetners are also likely to capture market share from traditional sugar end-users, but, in this case, competition with sugar is not based on price.

Export opportunities other than to the United States are limited to "spot" markets, due, in large part, to the many trade restrictions applied by other producing or refining nations. Canadian efforts to export have, therefore, been severely limited.

For further information concerning the subject matter contained in this profile, contact:

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235 Queen Street
Ottawa, Ontario
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(613) 954-2918

PRINCIPAL STATISTICS

SIC(s) COVERED: 1081. (1980)

	1973	1982	1983	1984	1985	1986
Establishments*	14	12	12	10	9	8
Employment	2 685	2 338	2 213	2 301	2 109	1 915
Shipments ($ millions)	336	597	572	553	454	466
Shipments ('000 tonnes)	1 070	925	913	985	976	976
Gross domestic product (constant 1981 $ millions)	—	128	119	90	N/A	N/A
Investment ($ millions)		59.0	28.0	26.4	23.0	20.9

TRADE STATISTICS

	1982	1983	1984	1985	1986
Exports ($ millions)**	47.9	41.0	41.9	31.6	47.9
Domestic shipments ($ millions)	549.1	531.0	511.1	422.4	418.1
Imports ($ millions)***	55.0	13.2	17.9	31.9	41.0
Canadian market ($ millions)	604.1	549.2	529.0	454.3	459.1
Exports as % of shipments (quantity basis)	8.8	8.3	7.2	5.6	8.2
Imports as % of domestic market (quantity basis)	0.8	3.1	4.2	10.0	11.3

Source of imports (% of total value)		U.S.	E.C.	Asia	Others
	1981	90	0	0	10
	1982	86	0	0	14
	1983	89	0	0	11
	1984	95	0	0	5
	1985	94	0	0	6
	1986	98	0	0	2

Destination of exports (% of total value)		U.S.	E.C.	Asia	Others
	1981	2	0	0	98
	1982	54	0	0	46
	1983	89	0	0	11
	1984	96	0	0	4
	1985	95	0	0	5
	1986	97	0	0	3

(continued)

REGIONAL DISTRIBUTION — Average over the last 3 years

(* Not including the one minor establishment).

	Atlantic	Quebec	Ontario	Prairies	B.C.
Establishments - % of total	14	14	30	28	14

MAJOR FIRMS

Name	Ownership	Location of Major Plants
B.C. Sugar Refinery Limited	Canadian	British Columbia, Alberta, Manitoba
Lantic Sugar Limited	Canadian	New Brunswick, Ontario, Quebec
Redpath Sugars	U.K./Canadian	Ontario

* In its establishment count, Statistics Canada includes the major sugar refining establishments (seven in 1986) and one very small processor of molasses.
** Exports — Commodity Code 101-39
*** Imports — Commodity Code 101-39 and 101.48

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