INDUSTRY PROFILE

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

Flour Milling

Canada

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FLOUR MILLING

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 flour milling industry comprises firms which primarily mill wheat and other cereal grains such as corn and oats into flour and meal, and to a lesser extent blend flour into bakery mixes. The industry is closely linked (and in some cases integrated through ownership), with the baking, biscuit and breakfast cereal manufacturing industries, which collectively use more than 50 percent of all milled cereal products consumed in Canada. It provides a market for about 10 percent of Canadian wheat production and has an impact on the grain handling and storage system. Flour is produced primarily for the domestic market. The remaining wheat that is not milled (approximately 90 percent of production) is exported.

Output of the flour milling industry has increased gradually over the past 15 years. Production of wheat flour increased from about 1.7 million tonnes in 1973-74 to an estimated 2.4 million tonnes in 1986. Value of production for 1986 is estimated at $825 million.

Wheat grown in western Canada consists mainly of the hard varieties (hard kernels and relatively high protein levels) largely used in bread making. Durum wheat, also grown in western Canada, which has very high protein levels, is used in pasta production. Soft wheat, grown primarily in Ontario, has lower protein levels and is suited for cake and pastry flours. Hard wheat accounts for approximately 82 percent of wheat milled in Canada, followed by soft wheat at 12 percent and durum wheat at six percent.

There are currently 38 flour mills operating in Canada. They include branch plants of multinational companies and two mills which are components of pasta and breakfast cereal plants. The three largest firms operate 13 plants, representing approximately 75 percent of total Canadian milling capacity. Two of the three largest firms are foreign-owned, and operate 12 mills. Total employment in the flour industry is approximately 3000 persons.

There is a distinct regional aspect to the Canadian flour milling industry, with 40 percent of employment located in Ontario. In the period since World War II, milling capacity has slowly but steadily increased in eastern Canada while declining in western Canada. This trend reflects the ongoing closure of older western mills built earlier in this century to serve export markets which have now disappeared. Approximately 70 percent of the nation's milling capacity is now located in Ontario and Quebec.

The milling industry is highly regulated. All plants operate under licences issued by Agriculture Canada. The Canadian Grain Commission (CGC) inspects plant operations. The Canadian Wheat Board (CWB) controls supplies of grain for milling and sets prices to domestic millers. Import restrictions on wheat and bulk wheat products create what is essentially a closed market. However, imports of retail packs of pasta and baked goods have risen in recent years because domestic wheat prices have increased significantly while international wheat prices have decreased. This trend is particularly evident in British Columbia, where an estimated 20 percent of the Vancouver retail bread market is now supplied from the United States.

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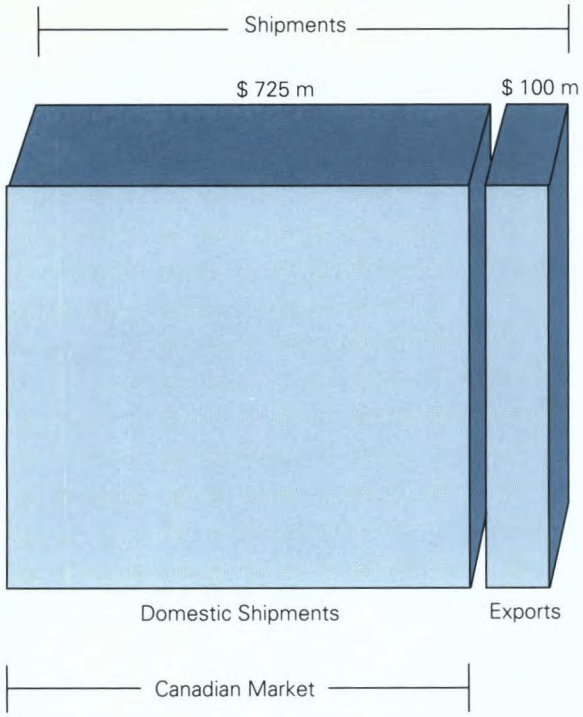


Exports and Domestic Shipments*
1986

** Imports are estimated at $ 4 million, less than 1% of the Canadian Market.*

In 1986, exports of wheat flour and by-products totalled 303 000 tonnes, representing a value of $100 million. The Canadian share of world trade in flour has declined from roughly 20 percent in the early 1970s to less than five percent today. The reason for this decline is that former markets have largely developed their own milling capacity. The export markets that remain are dominated, for the most part, by the United States and the European Community (E.C.) because of their subsidy and export credit programs. As a result of E.C. export subsidies, Canada's only commercial export market in Cuba is currently being threatened. This would mean a reduction in exports of approximately 60 percent, with remaining exports being in the form of food aid

Performance

On account of the decline in exports and per capita flour consumption in Canada, the industry has undergone extensive rationalization since 1973. The number of companies has declined slowly and several large but aging milling facilities in western Canada have closed. Employment and shipments during the period were not greatly affected, as the expansion of the more modern mills offset the closure of obsolete facilities.

Canadian mills have operated at around 75 percent of their six-day rated capacity (three shifts per day) throughout the 1980s. This chronic underutilization of capacity is greater in western Canada, and reflects the continued erosion of world markets for commercial flour from Canada, caused by subsidized exports by the E.C., increased milling in traditional markets and limited food aid allocations for flour purchases. Because of export subsidies and food aid programs, the U.S. industry has been operating at 85 percent to 95 percent of its six-day rated capacity in recent years.

Many Canadian mills are old but can still operate efficiently. Except for recent improvements in material handling, the capital costs of such mills have long since been recovered. Current operations, therefore, need only cover their variable costs to be profitable. Although the industry is marginally profitable, rates of return are insufficient for needed capital replacement and modernization.

Several large firms have diversified in recent years into other food product areas (e.g., bakery mixes) in an effort to offset the decline in demand for household flour.

2. Strengths and Weaknesses

Structural Factors

International competitiveness in the wheat flour milling industry requires good quality raw materials at competitive prices (wheat accounts for 75 percent of the value of flour), advanced milling technology, a well-developed transportation system to deliver the product to market and economies of scale. High-quality wheat with a high-protein content is valued in flour production; however, advances in milling technology are making it possible to produce a good quality of flour from lower-protein wheat. Flour milling is a capital-intensive operation from which economies of scale can be derived.

The Canadian flour milling industry is protected from import competition by the CWB, which controls the import of grains into Canada. Under this system, flour and wheat imports are permitted only under exceptional circumstances. As a result of import controls and subsidized competition in the export market, the Canadian milling industry largely serves the domestic market, with the exception of some export sales, now primarily in the form of food aid. The relatively small and diversified domestic market requires mills to produce for a wide variety of end uses. As a result, the Canadian industry maintains the flexibility needed to serve the domestic market. Canadian millers also have access to supplies of high-quality wheat which produces a good quality of flour.

Because of Canada's former role as a major flour exporter, the flour milling industry also has the capability to fill major export contracts. This capability is augmented by favourable transportation rates which apply on rail freight movements of wheat and flour from western to eastern Canada, and on exports, through both east and west coast ports. The *Western Grain Transportation Act* provides lower-than-commercial rates for flour shipped from the prairies to Thunder Bay or Vancouver. The "Atlantic and East of Buffalo" rates provide similar benefits for shipments of flour from Thunder Bay to export positions in eastern Canada. In addition, transportation assistance is provided to equalize the cost of milling flour for export in eastern and western Canada.

The protected domestic market has meant that the Canadian flour milling industry has developed somewhat in isolation from the international market.

Canadian milling technology is appropriate to its diversified market and to the raw material mix at its disposal. Given the small size of the Canadian market, however, Canadian millers have not been able to benefit from the specialized production and economies of scale that are available to U.S. flour millers who have a larger domestic market and higher capacity utilization. U.S. millers also have access to a greater variety of wheat than do Canadian millers. Because of import controls, the Canadian milling industry must purchase wheat primarily from the CWB and the Ontario Wheat Producers' Marketing Board at prices which have been significantly above world levels. This diversity in raw material supplies, combined with lower prices, can lead to cost advantages for U.S. millers. High domestic wheat prices have put Canadian end-users of flour at a competitive disadvantage with foreign processors and has indirectly affected the domestic market for flour. The new domestic wheat pricing policy (1988) is designed to provide Canadian millers with wheat at prices comparable to those paid by U.S. millers, thus eliminating the two-price wheat policy in Canada.

A number of European flour milling industries (particularly in the United Kingdom and Switzerland) have adopted electronic process control to such an extent that mills can run for substantial periods of time virtually without labour. Canadian mills have adopted some automated process monitoring but they have stopped short of the fully automated mill, typical of some parts of the more specialized European industry. A marginal rate of profitability and limited production specialization have restrained investment by Canadian millers in this area. Apart from a savings in labour costs, automated process control can provide greater consistency in milling operations.

Another difference between the European and Canadian industries is the rate of extraction of wheat from flour, which tends to be higher in European mills. The higher rate of extraction enhances milling profitability by increasing the percentage of flour in the mix of the mills' end-products (e.g., high-value flour and low-value mill feeds). Canadian millers supply a diversified market which requires split-milling runs and thus limits the rate of extraction achieved. This difference in extraction rates can be influenced by the type of wheat milled, the technology used and the nature of the market.

The existence of import controls and central selling agencies for wheat have resulted in Canadian millers not possessing certain trading and procurement skills considered essential in the United States and elsewhere. For example, U.S. millers hedge their wheat purchases on the futures market. In Canada, there is no futures market for bread wheat; therefore, millers purchase directly from central selling agencies such as the CWB under terms prescribed by these agencies and by the government's domestic wheat pricing policy.

Trade-related Factors

Canada's tariff on flour is 50¢ per barrel (approximately 200 pounds). Tariffs on bakery mixes range from 7.5 to 10 percent ad valorem. The U.S tariff on flour is 52¢ per hundred pounds and 10 percent ad valorem on bakery mixes. The European Community (E.C.) has a system of variable levies on flour which covers the difference between the price of imported flour and the high E.C. domestic price.

Tariffs, however, are relatively unimportant determinants of the world trade in flour. Non-tariff measures, such as import licences and state trading and export subsidies, have had a much greater influence in determining which countries will supply which markets.

The Canadian milling industry is protected from imports of most milled products of wheat, oats and barley by the import controls imposed by the CWB. Some further-processed, flour-based products in retail packages are not controlled, although the CWB has the authority to restrict importation of these products.

Both the European Community and the United States provide direct export subsidies on flour. The most significant non-tariff measures in other countries are import controls, through licences or state procurement, to protect local flour milling industries.

Two features of the Canada-U.S. Free Trade Agreement (FTA) will have a significant effect on the flour milling industry. These are the elimination over a ten-year period of tariffs on wheat flour, bakery mixes and finished products containing flour, and the abolition of import licences for wheat, oats and barley and their products, once Canadian and U.S.-producer support levels are equal.

Technological Factors

Advances in flour production technology, in addition to those discussed above, include post-milling treatment and blending of flours to meet the specific needs of end-users. In the more common applications, additives such as dough conditioners, bleaches and vitamins are blended electronically before packaging, storage and shipment. In the more complicated applications, flour millers blend flours with a variety of ingredients to produce mixes for a complete range of breads and bakery products, for home or bakery use. Blending can increase profit margins and free mills from the need to use large amounts of expensive, high-quality wheat.

3. Evolving Environment

The flour milling industry operates in a highly regulated environment. Little change is foreseen in the industry under present conditions.

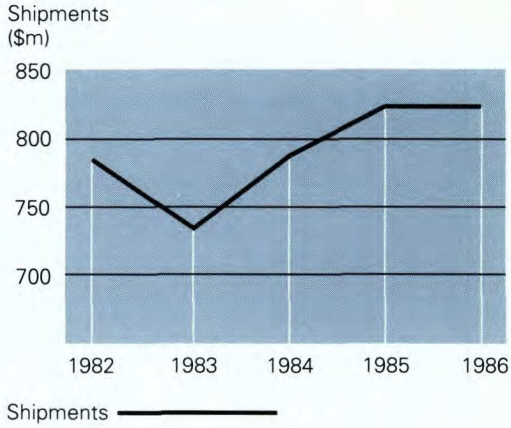
The consumer market for household or bagged flour does not offer any potential for industry expansion. Slow population growth, combined with declining per capita consumption due, in part, to steadily increasing prices, will continue to limit total domestic demand.

As a result of developments in baking technology, more lower-priced wheat containing less protein is being used in bread making. Consequently, Canadian farmers are showing a greater interest in growing higher-yielding but lower-protein wheat. The availability of these types of wheat will be important to the competitiveness of the flour milling industry.

Any increase in demand for flour will likely come as a result of an expanded use of flours, flour mixes, or purified flour fractions (starches, glutens) by the food processing industry, which already accounts for the bulk of consumption in North America. These opportunities can only be realized if Canadian prices for flour and flour-derived products allow Canadian manufacturers of further-processed foods (e.g., pasta and bakery mixes) to compete with their foreign counterparts in the domestic and export markets. As noted earlier, the new domestic wheat pricing policy is an important development that will provide Canadian millers with wheat at prices comparable to those paid by U.S. millers.

The commercial export market for milled grain products will continue to be dominated by the United States and the European Community, as long as both continue to provide their millers with extensive export credit facilities and export price subsidies.

The food aid market is becoming increasingly more important to the milling industry as subsidized competition intensifies in the commercial export market. At the same time, milling capacity in developing countries is likely to expand and continue to shift the world import demand from milled cereal products to whole grains. This trend promises to reduce the demand for flour provided under food aid programs.



*Total Shipments**

* *Data for 1986 are estimated.*

Impacts on the performance of the flour milling industry under the FTA will occur in two phases. The first phase will take place with the elimination of tariffs on products using flour, but with import controls remaining in place on wheat and flour. The second phase will see the elimination of import controls, once Canadian and U.S. support levels are equalized, which will allow flour to be imported into Canada without permits.

With the elimination of tariffs on end products using flour, the producers of such products will be looking for considerably lower prices for flour in Canada to enable them to be competitive with U.S. processors. The prospects of the flour milling industry during phase one will depend on the competitiveness and productivity of the flour processors.

If and when producer subsidies become equalized[1] and import permits on wheat and flour are removed, Canadian millers will face direct import competition from U.S. flour — but also gain access to U.S. wheat. The U.S. industry has excess capacity that could be directed towards supplying the Canadian market from areas such as Buffalo, that are adjacent to large Canadian population centres. In such an environment, Canadian flour millers may find it necessary to acquire technology such as that employed by some European flour millers to increase production efficiencies. To take advantage of the availability of U.S. wheat, the industry has also recognized that expertise in wheat futures trading will be important.

1. Subsidies to U.S. wheat producers are considerably greater than those to Canadian producers.

In this longer-run environment, significant restructuring and closings could take place among segments of the industry that lack the financial resources for technology upgrading. It is anticipated that the larger flour millers would be able to compete successfully in this new environment, although they might also face some restructuring and consolidation. The competitiveness of smaller mills would probably depend upon their ability to service niche markets, such as stone-ground or whole-wheat flour.

The likelihood under this scenario is that some domestic market share would be lost to U.S. millers, with a smaller, more efficient Canadian industry emerging to take advantage of selected export opportunities in the United States.

Increased specialization may be important in order to capitalize on the more competitive market opportunities both in Canada and the United States. Ownership changes or production shifts are also a possibility for multinational companies.

4. Competitiveness Assessment

The flour milling industry does not face direct international competition in the domestic market. Domestic market competitiveness has been eroded through high domestic wheat prices and imports of processed flour products in retail packages that are not controlled through import permits. The industry is not competitive in the export market due to direct export subsidies used by competitors.

As long as import controls on flour and flour products remain, the elimination of tariffs for flour and processed flour products under the FTA will have little effect on the flour industry. This view assumes that tariff elimination has been offset by changes to the domestic wheat policy discussed above.

Given its current structure and competitive position, when import controls on flour are eventually removed under the FTA, the flour milling industry may not be fully competitive. In such an environment, the industry would be faced with restructuring and technological upgrading to increase efficiency and specialization of production.

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

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Ottawa, Ontario
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(613) 954-2924

PRINCIPAL STATISTICS

SIC(s) COVERED: 1051 (1980)

	1973	1982	1983	1984	1985	1986
Establishments	48	41	36	35	39	38
Employment		approximately 3000				
Shipments ($ millions)	227*	785	741	786	825	825*
('000 tonnes)	1 649	2 380	2 319	2 420	2 400*	2 400*

TRADE STATISTICS

	1973	1982	1983	1984	1985	1986
Exports ($ millions)	48	129	128	177	120	100
('000 tonnes)	423	308	303	434	274	303
Domestic shipments ($ millions)	179	656	613	609	705	725
Imports ($ millions)	1	3	3	4	4	4
Canadian market ($ millions)	180	659	616	613	709	729
Exports as % of shipments	21	16	17	23	15	12
Canadian share of international market (commercial sales est.)	15	9	5	11	8	8

Source of imports (% of total value)	U.S.	E.C.	Asia	Others
1981	not significant due to import controls			
1982				
1983				
1984				
1985				
1986				

Destination of exports (% of total value)	U.S.	E.C.	Asia	Others
1981	—	—	1	99
1982	1	—	17	82
1983	1	—	9	90
1984	1	—	28	71
1985	2	—	14	84
1986	2	—	18	80

(continued)

REGIONAL DISTRIBUTION — Average over the last 3 years

	Atlantic	Quebec	Ontario	Prairies	B.C.
Establishments – % of total	2.0	13.0	53.0	30.0	2.0
Employment – % of total	2.0	27.0	46.0	24.9	0.1
Shipments – % of total	3.0	25.0	44.0	27.7	0.3

MAJOR FIRMS

Name	Ownership	Location of Major Plants
Maple Leaf Mills Ltd.	United Kingdom	Toronto, Montréal, Calgary Port Colborne (Ontario)
Ogilvie Flour Mills Co. Ltd.	Canadian	Montréal, Midland, Winnipeg Medicine Hat, Strathroy (Ontario)
Robin Hood Multifoods Ltd.	United States	Montréal, Saskatoon, Port Colborne
Dover Mills Ltd.	Canadian	Halifax, Cambridge (Ontario)

* Estimate

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