

MF - 7800

FILE NO.: 1417-1

**CONSUMER GOODS, SERVICES
AND RESOURCE PROCESSING**

OCTOBER 15, 1982

VOLUME 3

MINERAL-BASED CONSTRUCTION PRODUCTS

The attached overview has been difficult to prepare at short notice, partly because it covers some S.I.C.'s in whole and others in part. In addition statistics on the flat glass industry are not available because there are only two producers.

It has not been found possible to follow the outline for sector overview which was proposed. What has been done is to cover the subject matter as best as we could in the time available. We hope to improve upon it in the final version due later this year.

The outlook for the sector will be governed by the outlook for construction. Policies which help to stimulate construction will help the industries in this sector.

MINERAL-BASED CONSTRUCTION PRODUCTS

Overview

Mineral-based construction products cover a wide range of products including:

	<u>SIC</u>		<u>SIC</u>
Cement	352	Miscellaneous Non-metallic	3599
Concrete Products	354	Mineral Products Industries	
Ready-mix Concrete	355	- Mineral Wool insulation	
Mineral Aggregates		- Mineral Acoustical ceiling	
- Sand & Gravel	087	tiles and Panels	
- Stone Quarries	083	Asphalt Roofing	272
Flat Glass	356	Clay Products	
		- Clay Brick	3511
		- Ceramic Tiles	3512
		Gypsum	073
		Stone Products	353

The diversity of mineral-based construction products produced in Canada makes analysis on a broad sectoral basis very difficult. However, the markets served are similar and there are many common characteristics among these products. With some exceptions, these products are typically of low value per unit weight or volume and transportation costs inhibit shipping any great distance. Production facilities are generally spread across the country and respond quickly to regional opportunities. The output of many of these facilities is strongly affected by seasonal fluctuations in demand.

Some of the mineral-based construction products such as cement, flat glass and mineral wool insulation are produced in large, complex, continuous processing operations which cannot be shut down without incurring expensive shut-down costs. Other products including concrete products, ready-mix concrete and clay products are less complex batch-type operations generally producing product on a one or two shift basis. In contrast, the production of other products including crude gypsum, sand and gravel and quarried stone are basic mining activities.

The sharply rising cost of energy has received considerable attention by the energy-intensive cement, flat glass, mineral wool, insulation and clay products industries as well as concrete block, brick and gypsum wallboard manufacturers. Investment in energy saving processes has been particularly important in the cement industry, which has also been switching their primary fuel source from oil and gas to coal. The mineral-based construction products sectors are closely following developments in environmental and health hazard control.

- 2 -

There is a close correlation between the demand for construction materials and construction activity within a given region. At the moment there are few bright spots across Canada in construction activity and all of the mineral-based construction products sectors have serious overcapacity problems which have led to layoffs and both temporary and permanent plant closures. The year 1982 will likely be one of the worst since the Depression for construction activity.

Residential construction starts in 1982 are forecast by Canada Mortgage and Housing Corporation at 135,000 units as compared with 178,000 units in 1981 and a forecast of 159,000 units in 1983. There is, however, "cautious optimism" regarding residential construction in 1983 among the various mineral-based construction products companies recently contacted. The general consensus is that 1983 will show a slight improvement over 1982 in residential construction, partly due to the federal and provincial housing programs designed to improve access to home ownership and to the gradual decline in interest rates. Nevertheless there is still concern over the current reluctance of consumers to invest in housing, the uncertainty of a possible return to higher interest rates, and the slow growth in real disposable income.

Non-residential construction, up until this year, has been experiencing significant growth, particularly in western Canada. However this sector of building construction activity has totally collapsed in the major centres across Canada and many of the mega projects have been delayed, postponed or cancelled. A mid-year survey conducted by Statistics Canada has shown that there are fewer projects being planned and the capital investment forecast is down several percentage points. The mineral-based construction products sectors confirm this outlook, and a turnaround before 1984 is not expected, as it generally takes at least six months to a year to plan for the development of a major project.

In the past, high tariff barriers on processed materials and manufactured products have encouraged multinational companies to establish subsidiaries in Canada to serve the Canadian market. This is true in the cases of flat glass and mineral wool insulation, where foreign owned companies dominate. Under the Tokyo Round of the Multilateral Trade Negotiations a more competitive environment is being created, as tariffs are reduced. Some Canadian mineral-based construction products sectors are already experiencing hardships in spite of the advantage of the significant difference in the value of the Canadian as compared with the American dollar.

For the most part, the mineral-based construction product sectors are not export oriented. There are however, major exports of some products such as cement, crude gypsum and asphalt roofing, and limited exports of clay brick, mineral aggregates, flat glass, mineral acoustical ceiling tiles and some concrete products. The U.S. border states are the prime markets for these exports along

- 3 -

with "special situations" in other countries. The Canadian plants tend to be smaller than their American counterparts, with higher unit costs and in some instances a narrower range of products. The presence of foreign control in some sectors has also constrained export potential as well as research and development in Canada.

On the whole, there are few approved or announced policies which directly relate to a national sectoral policy for mineral-based construction products. Furthermore, interprovincial issues are not common. In terms of DRIE policy it is suggested that there is a strong need for an overview of the Canadian mineral-based construction products sectors. Many of the companies are international or national in scope. Besides, a regional outlook does not necessarily reflect the national perspective of these sectors. It is also proposed that DRIE should not encourage the establishment of new mineral-based construction products firms where local demand is unable to support additional capacity. Finally it appears that the mineral-based construction products sectors will have to become more aggressive in exporting their products since domestic demand in the 1980's generally shows limited potential for growth. In turn DRIE should do everything possible to support export efforts in these sectors.

Cement

Cement markets are regional in scope and are centered in developing urban areas where construction activity is concentrated. Because raw materials for cement manufacture are generally widespread, most regions or countries can supply their own cement requirements if market volume warrants. In some cases markets experiencing a buoyant surge in construction have lead to distant domestic and export shipments.

There are eight grey and one white portland cement producers across Canada employing just under 5,000 workers in 23 plants with annual output valued at \$681 million in 1981. Three European - controlled cement companies dominate the industry. On the whole the Canadian cement industry is modern and efficient and has benefitted considerably from European technology. At the end of 1981, cement clinker capacity was approximately 15.9 million tonnes per year. This capacity is distributed as follows:

Atlantic	5.5 %	Prairies	21.1 %
Quebec	22.9 %	British Columbia	10.0 %
Ontario	40.5 %		

The Portland Cement Association forecasts that 1982 will be one of the worst years in recent history for domestic cement consumption. The situation on a regional basis is as follows:

- 4 -

DOMESTIC CEMENT CONSUMPTION

	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>
	Actual		Forecast	
		000's tonnes		
Atlantic	442	457	350	380
Quebec	1600	1581	1200	1250
Ontario	2537	2508	2000	2100
Western	<u>3424</u>	<u>3212</u>	<u>2600</u>	<u>2600</u>
Total	<u>8003</u>	<u>7758</u>	<u>6150</u>	<u>6330</u>

Declines are most severe in western Canada where demand has fallen 20 per cent under last year.

Exports of cement and clinker products have played an important role in the development and expansion of the Canadian cement industry. In 1981, Canadian portland cement exports were 1.6 million tonnes, valued at \$69 million. Most of the exports are to areas in the United States close to Ontario and Quebec cement producers. There is no duty on cement exported to the United States. Imports, primarily of white cement, are minimal.

In 1982, the domestic cement industry has been operating at less than 50 per cent of capacity. A number of cement plants have been temporarily closed in Ontario and Quebec, and others are reported to be closing down their cement production facilities for the winter months. One small cement plant in Manitoba has been closed down on an indefinite basis. The white cement producer located in south western Ontario, which is heavily dependent on export orders, is currently facing stiff competition from American white cement companies. However, white cement can be transported greater distances than ordinary grey portland cement because of a higher sales value.

The basics of cement manufacture will not change greatly in the remainder of the 1980's. Trends to modernize existing capacity and adopt more energy-efficient processes should continue. However, it is unlikely that there will be major expansions in capacity given the slowdown in growth of construction activity in both Canada and United States.

The petroleum price subsidies of the federal government appear to be supporting the asphalt paving industry at the expense of the concrete paving industry.

Concrete Products

The concrete products industry (SIC 354) includes a wide range of products which are broken down under three sub-headings:

- 5 -

SIC 3541 Concrete Pipe Manufacturers
SIC 3542 Manufacturers of Structural
Concrete Products
SIC 3549 Concrete Products Manufacturers N.E.S.

Concrete products include, for example, building blocks, concrete pipe, sand-lime and concrete bricks, utility poles, septic tanks, steps, curbs, burial vaults, patio slabs, railway ties, interlocking paving stones, retaining wall supports, prestressed beams, prestressed hollow-core slabs and structural components.

In 1980 there were 489 establishments in Canada which produced \$567 million of shipments. Over two-thirds of the establishments are located in Ontario and Quebec. With the exception of the Yukon and the Northwest Territories there are concrete products companies in all parts of Canada.

The size of firms manufacturing concrete products ranges from a small family-owned enterprise to a division of a large international concern. However, the majority of the companies have under one hundred employees, and under \$2 million in sales per year. Several of the important foreign subsidiaries in the products industry are controlled by European cement companies. Most of the small companies are owned by Canadians.

Product distribution in the concrete products industry is usually on a regional level. However, some parts of the industry have developed export opportunities in the United States. In 1981 \$13.6 million of prestressed concrete structural products were exported. Ontario firms are also exporting interlocking paving stones into the U.S. market.

At the moment there is considerable excess capacity in the concrete products industry. Some small firms and a few larger companies are facing serious problems because of the downturn in construction activity. There is little opportunity for a turnaround in this sector unless there is a significant growth in local construction activity.

Ready-Mix Concrete

The ready-mix concrete manufacturing industry is primarily engaged in mixing and delivering ready-mix concrete. Poured-in-place concrete is one of the few construction materials produced on the job site. In 1980, there were 500 ready-mix concrete establishments in Canada which shipped ready-mix concrete valued at \$898 million of their own manufacture. One-half of the ready-mix concrete industry is located in Ontario and Quebec, and there are establishments in all provinces and in the Yukon and Northwest Territories. Employment was over 7,000 persons in 1980. Ready-mix concrete consumes over two-thirds of the portland cement used in Canada. Therefore, in order to protect market shares for cement, there has

- 6 -

been considerable vertical integration by the large cement companies. The ready-mix concrete industry is wholly dependent on the domestic construction market.

Mineral Aggregate

The mineral aggregate industry exists in all parts of Canada where there is construction activity. In 1981, 287 million tonnes of sand and gravel and 95 million tonnes of crushed stone were produced, at a cost of nearly \$900 million. Employment is around 3,500 persons, in 231 establishments. There are probably three to four thousand pits and quarries across Canada with a heavy concentration of these sites in Quebec and Ontario. The size ranges from the small producer supplying 10 to 20 thousand tonnes per year, to large diversified companies with an annual output of several million tonnes. The cement industry owns a number of large quarries which are used primarily to supply crushed stone for their cement operations. Some of the cement companies have sand and gravel operations which supply ready-mix concrete subsidiaries and other uses.

The demand for mineral aggregate is closely associated with construction activity. Road construction and maintenance is by far the most important use for mineral aggregates, consuming approximately one-half of the sand and gravel and one-third of the crushed stone produced in Canada. The concrete industry is the second largest user of mineral aggregates. Less significant uses are for mines, railway ballast, lime manufacture, and agriculture and chemicals. In 1982, the demand for mineral aggregate has been seriously cut back. Road building activity across Canada is down from last year and, as mentioned earlier in this review, the cement and concrete products industries, which use large quantities of mineral aggregate, are operating at well below capacity.

Recently, social pressures to restrict the activity of the mineral aggregate industry have been growing. Consequently, various steps have been taken to correct the situation by the introduction of strict conditions and controls by provincial and local governments. In some areas, such as southern Ontario, the aggregate industry is being encouraged to locate further from the urban centres.

Several million tonnes of sand and gravel and crushed stone are exported from Canada to the United States in situations where water transportation is readily available, as on the Great Lakes and the West Coast. Imports are also significant, but also on a local, cost-efficient basis.

Flat Glass

Flat glass is produced in Canada by two major companies located in southern Ontario, both of which are foreign controlled. In

- 8 -

Residential market demand for glass fibre insulation has declined right across Canada and there is unlikely to be any change before the end of the year. However, there may be a modest upturn in demand in 1983. In contrast the demand for industrial and commercial insulation is not expected to improve until 1984.

The Canadian Home Insulation Program (CHIP) was introduced by the federal government in 1977 to encourage the saving of energy through residential insulation retrofit. Owners of about 30 per cent of the homes built before 1961 have taken advantage of the taxable grants of up to \$500. Effective April 1, 1982, the CHIP program was broadened to include an estimated 1.6 million homes built between January 1, 1961 and January 1, 1971. This program, which terminates in 1987, has been of considerable assistance to the mineral wool insulation industry.

Looking ahead, it is unlikely that there will be any major capital investments made by the mineral wool insulation sector in the medium term. There is currently substantial unused production capacity and the demand for insulation materials is not expected to grow during the remainder of the 1980's as rapidly as it did in the 1970's.

Mineral Acoustical Ceiling Tiles and Panels

Mineral acoustical ceiling tiles and panels are used in tee-grid suspended ceiling systems. There are fundamentally two types of ceiling tiles, a Class I ceiling tile which is used in non-combustible construction situations, and another class of fire-rated ceiling tiles. These products are made from either rock wool or glass fibre materials and other components. Most of these ceiling tiles and panels are sold for non-residential construction. The retrofit market is an important sector for these products.

In Canada there are three ceiling tile manufacturers, two producing rock wool products and the third a glass fibre product. One of the rock wool manufacturers is located in Quebec and the two other firms are in Ontario. At the end of 1982 the rock wool ceiling tile plant in Ontario is scheduled to be shut down permanently.

In recent years the domestic market has been stable at around 100 million square feet or more a year. However, the mineral-based ceiling tile industry has been seriously affected by the decline in non-residential construction activity. To compound the problem the American industry has considerable excess capacity and it is shipping large quantities of low-cost ceiling tiles into the Canadian market. U.S. imports in 1982 could account for 40 to 50 percent of the Canadian market. Therefore a very serious situation is developing in this industry for the domestic producers which will give rise to consideration of government financial assistance.

- 7 -

addition, there are an number of independent Canadian firms which produce specialty glass in Quebec, Ontario, Manitoba, Alberta and British Columbia.

Statistics are not available on domestic production of flat glass because of confidentiality requirements. Information is available however, on imports of various forms of flat glass, which amounted to \$40 million in 1981. Imports of speciality glasses accounted for a further \$15 million. Tariffs on these glass products are quite low. There are also some exports of flat glass.

Housing accounts for around one-half of the market for flat glass, the automotive market about one-third, and non-residential construction makes up the balance. The severe down-turn in both construction activity and the automotive market has seriously curtailed the demand for flat glass and eroded profit margins. The two flat glass producers have substantial excess capacity and are watching costs very carefully. At the same time, some of the specialty glass producers could go out of business. The outlook in 1983 for the flat glass industry is not encouraging.

Mineral Wool Insulation

Mineral wool insulation consists of two basic products, rock wool and glass fibre insulations. Rock wool has been produced in Canada since before the Second World War, but as the glass fibre industry gained acceptance in the insulation business in the 1960's and 1970's, the demand for rock wool has dwindled. At the present time the glass fibre producers have around 60 per cent of the insulation products market while rock wool accounts for less than 5 per cent of this market.

Statistics Canada reported that mineral wool insulation shipments in 1981 were valued at \$194 million. Both exports and imports of mineral wool insulation are relatively insignificant. There are four rock wool manufacturers in Ontario and another in British Columbia. A firm with a plant in Alberta closed down permanently earlier this year.

In comparison there are four glass fibre insulation companies in Canada including two major producers, which are both owned by American parent companies, and two small Canadian-owned firms. The largest glass fibre producer in Canada dominates the market and has plants in New Brunswick, Quebec, Ontario, Alberta and British Columbia. The second major producer has plants in Quebec, Ontario and Alberta, but the Ontario plant has been closed down until market conditions improve. The two small glass fibre insulation manufacturers are both located in Ontario.

The residential market consumes over one-half of the glass fibre insulation output in Canada, while industrial and commercial uses takes up the balance. The demand for glass fibre insulation is in the form of batts, rolls, roofing and wall board and blowing wool.

- 9 -

Asphalt Roofing

This sector covers smooth and mineral-surfaced rolled roofing and shingles. The industry has 17 plants operating in various cities from Montreal to Vancouver. There are four companies in the business, two U.S.-controlled and two domestic firms. Demand for asphalt roofing responds closely to housing starts since 90 per cent of production is in the form of asphalt shingles for residential dwellings. The industry is highly automated and capital intensive. Prices have been rising steadily, since the product is petroleum based. Total plant shipments in 1980 were \$244 million employing roughly 1,000 workers. Idle capacity currently exists.

Exports have been rising steadily and last year shipments were made to 26 countries at a value of \$44 million. About 90 per cent was destined for the U.S. The outlook is for production to increase with housing starts and for a steady expansion in exports. The growth in exports is unintentionally subsidized to some extent through government support payments to the oil industry to hold down prices of petroleum products. There are no significant imports.

Clay Brick

The clay brick industry is well established across Canada, but over the last ten years it has experienced very little growth. Alternative materials such as concrete, aluminum and steel have provided strong competition. High labour costs and shortages of bricklayers have also had a detrimental effect. Furthermore, clay brick has to compete with cheaper brick of concrete and sand-lime.

In 1980 the value of clay brick shipments was \$77 million, down from \$87 million in 1979. Most of the clay brick goes into residential construction. Architects have an important role in the choice of bricks, which has led to problems in setting standards. There are currently many types of clay bricks in the market. Efforts to set a standard brick size in Ontario recently failed because producers were unable to find a size that would have equitable implications for the cost of equipment changes needed by all of the producers.

Exports of clay brick are limited. During 1981 exports were only \$0.7 million, most of which went to markets in the United States. In comparison imports of American clay brick were valued at \$3.3 million in 1981. The Canadian clay brick industry faces higher labour, transportation and energy costs than its U.S. competition. Besides, the American clay brick producers operate under more varied conditions and in larger volumes reducing incremental costs.

Almost three-quarters of the Canadian clay brick industry is located in Ontario, with much of the balance being in Quebec. There are at least 15 clay brick manufacturers located in Newfoundland, Nova Scotia, Quebec, Ontario, Saskatchewan, Alberta and British Columbia. Because of high inventories caused by the decline

- 10 -

in construction activity, some clay brick plants have temporarily ceased production or sharply cut back output.

Ceramic Tile

Ceramic tiles are presently enjoying a much higher degree of acceptance than in the past in Canada. Ceramic tiles have a relative price advantage over other petroleum-based products used for floor and wall applications. Furthermore, ceramic tiles require very little maintenance. Canadian consumption of ceramic tiles was approximately 100 million square feet, valued at around \$75 million in 1981. However, in 1982 demand is forecast to decline to 80/85 million square feet.

In 1981, 86 per cent of total Canadian requirements were imported. In the last decade the market share of Canadian manufacturers has decreased from 26 to 14 per cent. There are currently only two ceramic tile producers in Canada, one in Ontario and the other in Quebec. Two other ceramic tile producers, one in Ontario and another in Quebec ceased operations in 1981.

Gypsum

Canada ranks second in the world, after the United States, as a major supplier of crude gypsum. Production of crude gypsum is closely related to construction activity in both Canada and the United States since around two-thirds of our domestic output is exported to the United States.

Canadian production of crude gypsum is principally in Nova Scotia and Newfoundland, which account for over three-quarters of Canadian production and for the major portion of crude gypsum exports. Ontario, Manitoba and British Columbia also produce crude gypsum. In 1981 7.8 million tonnes of crude gypsum worth \$46.4 million were produced in Canadian mines. Crude gypsum exports in 1981 were 5.1 million tonnes, valued at \$27.6 million. Limited imports from the United States penetrate some local markets in Canada.

Wallboard is the most important product made from crude gypsum. There has been a trend towards the use of relatively more gypsum wallboard in institutional and commercial applications because of its fire retardent qualities. Residential construction, and the retrofit market, are also important uses for wallboard. Although new construction materials are being introduced, gypsum wallboard will remain popular because of its low prices, ease of installation and its fire retardent and insulating properties.

Other uses for crude gypsum include lath, sheathing plasters and joint fillers. Crude gypsum is also used in the manufacture of portland cement where the gypsum acts as a retardent to control set.

- 11 -

The major producers of crude gypsum, with one exception, are subsidiaries of American and British companies. Quebec gypsum wallboard and cement plants use crude gypsum from the Atlantic provinces. Ontario production is used on site, or in a nearby manufacturing plant. Manitoba and British Columbia supply the Prairie and British Columbia markets with gypsum for manufacturing. Some crude gypsum imports from Mexico are used by both the wallboard and cement producers in British Columbia.

Competition is keen in the gypsum wallboard industry in eastern Canada. A 70 year old plant was permanently closed down in New Brunswick at the end of 1980. A second facility is expected to cease operations in Quebec permanently at the end of the first quarter of 1983. Because of the lack of construction activity much of the gypsum wallboard industry is operating at well below capacity.

Stone Manufacturers

Building stone in cut and polished form accounts for only one per cent of stone production in Canada. Quarries are operating in every province except Prince Edward Island. The number of operations has decreased slightly to 128 in recent years. Production tends to be seasonal. Much of it is custom work on the basis of large orders for individual building projects which call for specific shapes, thicknesses, and colours, etc.

The main products in this class are building veneer, memorial stone and decorative stone for interior facings and furniture. The use of natural stone in construction has given way to glass, steel, brick, and precast concrete building facings because of costs of production and installation. Very little natural building stone can be used as a standard stock item.

The industry is capital intensive and employment tends to decline as technological advances are made. Total employment in this phase of the stone industry is roughly 1,100 workers, with about 50 per cent in Quebec and 20 per cent in Ontario. Production value is estimated at \$57 million and roughly 325,000 tonnes of finished stone was shipped in 1980.

Trade is not a serious consideration in either imports or exports; however, there is some activity involving certain types of marble and various colours of granite.

Transportation costs and wide availability are factors limiting development and expansion of the industry. The main approach to marketing is to sell architects on the value of specifying certain building stone because of its colour, quality, and cost, etc.

- 12 -

The Quebec government has recently given substantial financial support to the establishment of a modern cutting and polishing plant to service several quarries of the Eastern Townships of Quebec.

THE CANADIAN COAL INDUSTRY SECTOR OVERVIEW 1982

1.0 Sector Profile

Coal is classified by rank, ranging from lignite, with a low heat value and a high water content, to anthracite, a hard lustrous coal that is nearly free of water. Between the two extremes are various sub-bituminous and bituminous coals. Canada has no proven economically mineable true anthracite at present, but plenty of the other coal types. The rank of the coal has an important bearing on the end-use. A typical bituminous coal contains about 60-70 per cent carbon and four per cent hydrogen, the balance being mainly in undesirable constituents such as ash and sulphur.

The industry can be considered in two main sections: 1) coking coal or metallurgical coal for coke ovens at steel works and at merchant coke plants, and 2) thermal coal for power stations and industrial uses where heating and drying are involved. Coking coals must have certain coking properties and a high BTU content as well as low ash and sulphur. In thermal coal, delivered BTU content and sulphur content are the main pricing factors and, in the past, transportation costs determined the market range. The sulphur content of thermal coal is becoming of increasing environmental concern. Cement plants are becoming major coal users and are shifting rapidly from oil and gas back to coal as their major fuel. The sulphur content in coal used in cement kilns, within a broad range, does not adversely affect the product.

1.0.1 Background

Canadian coal resources are in a reasonable position for export, but rather poorly located to serve the main regions of domestic demand which are in Ontario. As a result, coal is exported from the east and west coasts of Canada and imported from the U.S. into Ontario.

During the 1950s and early '60s the Canadian coal industry suffered as the transition to heating by petroleum and complete railway dieselization took place. Since exports to Japan began on a subsidized basis in the mid-1950s, the industry has moved swiftly upward. Total production has increased from 9 million tonnes in 1969 to 40 million tonnes in 1981. Subvention expired in 1971 and all exports and domestic sales are now on a commercial basis.

1.0.2 Resources

In the 1970's, estimates were made of coal reserves in Western Canada where it is believed roughly 93% of Canadian resources are located. Considering all types of coal, the estimated reserves of current interest show 225 billion tonnes, with 13 billion tonnes of indicated reserves and 50 billion tonnes of measured reserves. As a normal procedure, the most economic reserves of a mine are recovered first. As the mines continue to expand, stripping ratios increase and production costs mount. This factor, combined with inflation and other general cost increases, has greatly affected the cost of coal in the past few years. Substantial price increases have occurred in recent years, improving the general reserve figures. Coal that was not interesting in past years may be economic at today's prices.

Actual short-term recoverable reserves may be somewhat different than the geological data that has been outlined. Allowing for mining and preparation plant losses, coal recovery can range from 30% to 70% of the mineable reserves for a given operation. Further work is being done to obtain a more accurate assessment of coal reserves and to arrive at a figure of economically recoverable reserves in terms of current operating conditions and markets. Exploration, development, and mining are mainly in the hands of private companies. It is difficult for a company to justify the expense of proving reserves beyond what is needed for a 20 to 30-year operation; so that recovered coal could eventually be higher in some cases than the tonnage estimated at present. See Appendix I.

U.S. coal reserves are estimated at 3.2 trillion tonnes or about 32 per cent of the world total.

1.0.3 Quality

Approximate Specifications of Canadian Bituminous Coals Being Produced for Export in 1982

	<u>Volatile</u> (%)	<u>Ash</u> (%)	<u>Sulphur</u> (%)	<u>Coking</u> <u>Index</u>
Devco - Nova Scotia (coking)	32-35	4-6	1.2	8
Luscar Alberta (Cardinal River)	24-26	9	0.3	5-7
McIntyre Alberta	17.5	7.5	0.5	7-9
Crows Nest Resources Ltd.	21-24	14-16	0.5	thermal
Coleman Alberta	20-23		0.6	thermal
B.C. Coal Ltd.	19-22	9.5	0.4	6-8
Fording British Columbia	21-24	9.5	0.4	5-7
Byron Creek British Columbia	22-24	12	0.3	thermal

Canada produces almost a complete range of coal, ranking from low-volatile bituminous through sub-bituminous and lignite coals. Anthracite is no longer produced in Canada, but Gulf Oil is looking at an anthracite property in B.C. Western coals are inclined to be high in ash and low in sulphur, while the eastern coals of North America tend to be low in ash and high in sulphur.

Most western coking coals are washed down to the 8-10 per cent ash range and the low sulphur of average 0.5 per cent is a particularly attractive characteristic. Bituminous coals range from 11,000-13,500 BTU/pound, and lignites around 6000 BTU/pound. In the Devco high volatile coal, the sulphur content is reduced to 1.2 per cent. The high fluidity and low ash specification of the Devco coal make it particularly attractive for blending. Devco and western coking coal are complementary in properties and make an excellent coking blend. No Canadian sub-bituminous coals or lignite are exported at present. Several of the companies, particularly B.C. Coal and Fording, are mining various seams now and are beginning to export more than one quality of coking coal (i.e., low, medium, and high volatiles).

1.0.4 Production - Canada

Until 1972 the record of production for all types of coal in Canada was in 1942 when it peaked at 16.2 million tonnes. This level was maintained until 1950 when production began to decline steadily to the 9 million tpy level of 1969. During this period a vast change in mining, transportation and marketing for the various types of coal took place. Industrial and domestic heating with oil and gas, plus

- 4 -

complete railway dieselization, had a major influence in the transition. Commencing in 1970 the total turned sharply upward because of coking coal developments in Western Canada on the basis of Japanese contracts. Now each year new production and export records are being set.

In 1981 production, considering all types of coal, reached 40.1 million tonnes, and the estimates for the late-1980s are in the range of 55 to 75 million tpy.

Three main types of coal are produced in Canada: bituminous, sub-bituminous and lignite. The sub-bituminous and lignites of the western provinces are used mainly to supply mine-mouth power plants. Last year coal was produced in five provinces ranging in rank from lignite in Saskatchewan up to bituminous low volatile coals in Alberta and British Columbia.

1.0.5 Canadian Consumption

In view of the location of domestic coal resources in relation to the main areas of coal demand, Canada is one of the largest importers of coal in the world following Japan and France. Canadian imports, which are entirely from the U.S.A. and destined for the Ontario market, are received by water from ports on the Great Lakes. There have been no shortages of coal from the U.S. in past years in spite of the frequent U.S. coal strikes, which the end-users now take into account in their stockpiling plans. Imports in 1981 were 14.2 million tonnes, of which 10 million tonnes was used by Ontario Hydro and the balance by the Ontario steel companies.

The coal supply situation is being carefully watched by Canadian industry and government. Since the energy crisis of 1973 there has been mounting concern about energy security of supply and conservation of resources in Canada and in many countries. For this reason new developments have been undertaken to permit the movement of major tonnages of Western Canadian coal to Ontario. The most important feature of these developments is the establishment of the Thunder Bay bulk terminal. This is considered a necessary commercial and political hedge in relation to security of supply. In 1982 approximately 3,600,000 tons of western coal, of various qualities, will be moved to Ontario Hydro. In past years 100,000 tons have been shipped to Sysco in Nova Scotia, but such shipments will not take place in 1982. In the near term, western coal movements to Eastern Canada are not expected to increase much beyond present contract levels (Ontario Hydro) because of high transportation costs and readily available U.S. coal. There is a low probability that these movements may increase in the long-term, depending on the general supply picture and delivered costs of competitive U.S. coals.

- 5 -

There is no shortage of coal in Ontario for 1982 or in the foreseeable future. Ontario Hydro and the steel companies are in as secure a position as possible with contracts and equity covering a major share of their U.S. imports. There is no direct funding by government to assist the movement of western coal or Nova Scotian Coal to Ontario.

Canadian Coal Consumption
(million metric tonnes)

	<u>1977</u>	<u>1980</u>	<u>1981</u>
Production	28.4	36.6	40.1
+ Imports	<u>15.4</u>	<u>15.8</u>	<u>14.2</u>
	43.8	52.4	54.3
- Exports	<u>13.3</u>	<u>14.3</u>	<u>16.3</u>
Apparent Consumption	30.5	38.1	38.0

1.1 Competitiveness

In 1981 the U.S. produced over 800 million tonnes, considering all types of coal. Production could reach 900 million tonnes in 1984 and the objective is to produce 1.2 billion tpy or more by 1990. "The Clean Air Act", "Mine and Safety Regulations" and reclamation laws tend to inhibit more rapid expansion. The 1981 strike settlement pushed wages and costs up substantially, but did not seriously affect U.S. exports. The U.S. coal industry has a great deal of flexibility in that there are literally thousands of mines. Resources are widely distributed across the country and there is access to many rail lines and coal terminals. In 1981 U.S. exports totalled a record 110 million tonnes, including all types of coal. Estimates are that this total included 40 million tonnes of thermal coal. U.S. coal reserves are recorded as the highest in the world.

Australia, Poland and South Africa are also major competitors in world coal markets. In some cases our competitors have advantages in terms of lower wages and proximity to ocean terminals etc. Western Canadian coal is transported by rail 700 miles through mountainous terrain to ocean terminals while in most other countries distances are much shorter and terrain is less difficult. For example in Australia distances are around 100 miles and the land is flat. Our western producers are often operating in extreme temperatures unlike conditions in many other countries. The mountainous mining conditions of Western Canada and the sub-marine operations in Nova Scotia require heavier capital

- 6 -

investment than is needed by the foreign competitors. Our western mines tend to have dipping seams as compared to flat seams in many other countries. Canadian labour productivity in terms of output per man shift is highly competitive. Canadian coal unit train rates are very competitive with transportation costs of other countries on a cost per tonne mile basis.

Australia is the main competitor for Canada in world markets, particularly in Japan, accounting for over 40 percent of Japanese coal imports, as compared to 16-18 percent for Canada, in recent years.

1.2 Provincial Distribution

Briefly by province the picture is as shown in the following table.

<u>Province</u>	<u>COAL PRODUCTION</u> (million tonnes)					1985-90 (Est)
	<u>1969</u>	<u>1974</u>	<u>1977</u>	<u>1980</u>	<u>1981</u>	
Nova Scotia	2.3	1.3	2.0	2.7	2.5	3.3
New Brunswick	.6	.4	.4	.4	.5	0.5
Saskatchewan (lig.)	1.8	3.4	5.5	6.0	6.8	7-8
Alberta (Bit. & S/B)	4.0	8.6	12.0	17.4	18.5	25-30
British Columbia	.8	7.7	8.5	10.1	11.8	25-30
	9.5	21.4	28.4	36.6	40.1	55-75
Bituminous	n/a	13.0	15.1	20.1	21.8	
Sub-bituminous	n/a	5.0	7.8	10.5	11.5	
Lignite	n/a	3.4	5.5	6.0	6.8	
TOTALS	9.5	21.4	28.4	36.6	40.1	

There are only about 20 significant producing coal mines in Canada. Of this group, only 7 western producers and Devco are capable of exporting. Since the first Japanese contracts were signed in 1967, only 15 years ago, Canadian production has increased by over 400 per cent from 9 million tonnes to 40.1 million tonnes. In the past few years several new mine developments have started. The only new mine to open in 1982, however, will be Crows Nest Resources in southeastern British Columbia. Many companies are operating in two or three western provinces. Interprovincial competition is not a serious issue.

- 7 -

1.3 Impact of Recession

In contrast to other sectors of the mineral and metals industry, the coal industry in Canada and many other parts of the world is expanding rapidly. The search for alternative fuels and conversions from oil and gas to coal by utilities and industrial users is down slightly but still has heavy momentum. Canadian coal companies continue to expand production, and exploration and development work is moving forward at a strong pace, particularly when compared to other sectors of the mining industry. The prospects are for continued expansion and development in 1982 and 1983.

In early 1982 the low levels of steel production in the world, combined with reduced world oil prices and increased coal production by many countries, began to have a serious impact on the coal industry. Energy conservation and the generally lower levels of economic activity in most parts of the world also contributed to the downward pressure on demand for coal in world trade.

Canadian coal developments have traditionally been on the basis of long-term contracts. To justify the necessary investment in mining and transportation facilities (unit trains, harbours) it is necessary for Canadian companies to develop resources in large blocks of 1 million tpy or higher. This requires three to five years of lead time. Other countries, particularly the U.S., having smaller mines and established infrastructure in their coal bearing regions, have lower investment requirements for new mine capacity. They can therefore justify establishing mine capacity for supplying the spot market.

In 1982 the coal market has softened considerably and an over-supply situation is developing, affecting both coking and steam coals. This is expected to be temporary and to improve as the general pace of industrial activity and energy demand begin to pick up. The prices of coal have moved steadily upward and are now at the following levels:

Coking coal - \$83.75 Cdn/tonne FOB Vancouver
Steam coal - \$50-55 Cdn/tonne FOB Vancouver

Several of the major Canadian coal development projects are proceeding as scheduled on the basis of long term contracts, including Quintette and Teck Corp. in northeastern British Columbia. In other areas of British Columbia and Alberta, Fording, B.C. Coal, Crowsnest, Union oil and Manalta are moving forward with new projects. For these projects it is not feasible to delay development to match market downturns that are expected to be temporary.

- 8 -

Several of the established exporters (B.C. Coal, McIntyre, Fording, Luscar) however, are in the position where their customers in Japan, Korea, Brazil and elsewhere are just unable to take their contractual commitments, and have made cutbacks. This is causing temporary shutdowns for several of the western producers, ranging from one to three months. Devco has not been seriously affected yet. Devco, so far, has been successful in selling in the European short term market to make up for loss of sales to Sysco and Stelco. This market, however, has many uncertainties. Devco should obtain firm long-term commitments before proceeding with major long-term capital investments on new mine development.

2.0 National Coal Policies

While there is no exact statement of Federal policy in respect to coal, the Government has indicated by its action and support that the future of the industry is expected to be one of long range expansion on an economically viable, non-subsidized basis for both domestic and export markets.

For the most part coal resources are under the control of the individual provinces and each province has a policy for orderly mining development. A detailed approval process for coal mine developments is administered by each province. Western coal mining development is undertaken mainly by private companies, with the oil companies being major investors. In Alberta and British Columbia bituminous coal is being developed essentially for export, while sub-bituminous coal is being mined for domestic power plants.

Saskatchewan has only lignite coal resources, and these are being developed to serve mine-mouth power plants. This permits other energy resources to be directed to other markets.

Imported oil costs are an important factor in the economy of the Maritime provinces and have influenced the viability of coal operations. For years previous to 1973, coal mining in Eastern Canada was being cut back and rationalization programs with social and political considerations were being carried out to stabilize the industry. There are now only two significant producers, Cape Breton Development Corp. (Devco), a federal crown corporation which took over from Dosco in 1968, and New Brunswick Coal Ltd.

New Brunswick Coal Ltd., is a provincial corporation producing roughly 0.5 million tpy for local power plants. The Company intends to expand production for local use in the 1980's, but prospects for major expansion are

- 9 -

limited because of the extent of reserves and the low quality of the New Brunswick coal.

Since oil price increases began in 1973 coal of the Maritime provinces has become more competitive as a fuel. Devco has major expansion and modernization proposals before the Government for the 1980's. The act which established Devco calls for their coal mining operations to be phased out as soon as possible, without causing major social dislocation. Circumstances are now changing, however, and the outlook for coal as a replacement for oil, particularly in the Maritime region, is promising.

Controls

There are no import or export controls exercised on Canadian coal shipments. The supply picture is strong and controls do not seem likely in foreseeable future.

3.0 Medium Term Outlook 1983-1987

The medium term outlook is for resumption of growth in international coal trade for both coking and thermal coals, but not at the rates forecast a few years ago.

3.1 Markets

The Canadian coal industry again set new records in terms of production, trade, and prices in 1981. Demand remained steady in the general coal market, but since Canadian companies ship mainly on contract, and some new thermal coal markets have been developed, production volumes were up slightly. International coal trade has been closely related to world steel production, an industry that has been operating below capacity since 1976 in most countries.

In 1980/81 steel production was improving slightly in some countries, such as South Korea and Brazil, but it remained almost level in other major coal markets, such as Japan. In 1982, however, production also began dropping in Korea and Brazil.

Japan is the largest coal importer in the world. In 1981 Japanese steel production was around 100 million tonnes and forecasts for 1985 are in the 110-115 million tpy range. Output in 1974 was 119.3 million tpy. The latest forecast for F.Y 1982 is 96 to 98 million tpy.

In the past three years, with mounting international oil prices, there has been a great increase in interest in thermal coal for electricity and for major industrial plants such as cement. Imported thermal coal

demand has increased significantly in many countries. In Japan, for example, the forecast is for an increase from 2 million tpy of imported thermal coal in 1978/79 to roughly 40 to 50 million tpy by 1990/95. Many other countries are also increasing thermal coal imports as fast as oil conversions can be made and new coal-fired stations can be built. In the future, thermal coal will be of increasing importance in world coal trade, and eventually it could be greater in volume than coking coal.

Japan is still the No. 1 market (10 million tonnes 1981), accounting for 66 per cent of Canadian coal exports. The industry expects that the Canadian share of the market will increase in the next five years from past levels of 17-18 per cent. Market diversification is continuing steadily in the coal industry. In 1981 shipments were made to 18 countries at a value of Canadian \$1.03 billion, up over \$200 million from 1980. Detail on exports is given in Appendix 2.

3.2 Prices

In the past five years international prices of thermal coal have tripled and in the same period coking coal prices have doubled. In mid-1982, prices of both types of coal turned downward because of low energy demand and lower steel production, combined with increased coal output in many countries. Anticipated strikes in Australia did not materialize, and South Africa and Poland moved more strongly into the coal export market. Oil prices have not increased as forecast for this year, and the spread between coal and oil effective energy costs has not widened as expected. For this reason there has been some slowdown in fuel conversions from oil to coal.

3.3 Volume

If all identified coal development projects materialize, roughly 20 million tonnes of new annual coal production could be brought on stream in B.C. and Alberta by 1988 and 4 to 5 million tpy in Nova Scotia. A major share of this output, particularly in the western provinces, is committed to export; however, additional long term contracts are being sought.

4.0 Interprovincial Issues

Coal resources for the most part are under the control of the provinces and royalties are paid to the province. Many companies in Western Canada are producing coal in two or three provinces. No serious interprovincial issues seem to exist.

- 11 -

5.0 Policy Implications

For the medium term, 1983 to 1988, probably sufficient new coal development projects have been identified in Canada to fully meet this country's share of the market potential. The capacity for coal mine construction and development will be fully occupied.

5.1 Eastern Canada

Devco has control of the only eastern coal resources with development potential. The company has several major capital projects underway as well proposals for future new mine developments in the medium term. These include:

- | | |
|-----------------|-------------------------|
| - Prince Mine | - Revised mining system |
| - No. 26 | - Rehabilitation |
| - Lingan Phelan | - New mine development |
| - Donkin Morien | - New mine development |

These projects could require approximately \$2.2 billion in capital investment in the next 10 years and increase Devco output from 3 million tpy to 7-8 million tpy by 1986/87. Sales contracts have not been obtained to cover the proposed expansion. Future demand by Sysco is uncertain. Devco's cost of production exceeds the selling price for coal delivered to the Nova Scotia Power Corporation.

As Devco is a federal Crown corporation, government decisions will have to be taken on whether to commit the substantial financial resources indicated.

5.2 Western Canada

Some companies may consider extending construction time, and phase in production over a longer period of time in view of the softness in coal markets. Many of the new development areas are in regions fully dependent on the coal mines. Maintenance of steady employment is an important concern of the companies involved.

In the construction period the potential shortage of skilled labour supply is a problem and for coal production other types of skilled workers are needed. Labour relocation is important. The present coal production operating force in Canada is roughly 12,000 persons.

As the proposed developments materialize an additional 5,000-6,000 miners could be employed. New production will be mainly surface mining. Manpower and Immigration and other departments are working closely with

- 12 -

the coal industry to develop the skilled labour force that will be required.

Western Canada has two sectors of coal activity. Lignite and sub-bituminous coal are not exportable at present. The bituminous coking and thermal coal production in British Columbia and Alberta is almost entirely exported. There are four main regions of development; a) Crowsnest area of British Columbia, b) Northeastern British Columbia, c) Hinton area of Alberta, and d) the Alberta-Lethbridge region. These regions produce coking and thermal coal and new developments are underway and proposed in each region. Some of the development is by established exporters and some by companies that are just entering the field.

In some cases new infrastructure will be installed which will require several billion dollars of new capital investment, by government and companies, as for example:

- B.C. Rail in northeastern British Columbia
- C.N. Rail up-grading, Prince George to Prince Rupert
- Town of Tumbler Ridge
- Ridley Island Terminal, Prince Rupert
- Rogers Pass CPR tunnels
- Roberts Bank expansion

Various levels of government, Federal and Provincial, will be investing in infrastructure related to new coal mining projects. There will be demands on the federal government for financial support for under-developed areas to cover such requirements as roads, power lines, schools, hospitals, housing, training programs etc. No direct investment or subsidies are planned for actual construction and development of coal mines.

APPENDIX I

TABLE 1. CANADIAN COAL RESOURCES (1,000,000 metric tonnes) all ranks of coal

Area	Coal rank	Resources of immediate interest			Resources of future interest		
		Measured	Indicated	Inferred	Measured	Indicated	Inferred
NOVA SCOTIA							
Sydney	hvb	175	502	719	—	—	—
Other	hvb	48	41	38	3	50	128
Subtotal	hvb	223	543	757	3	50	128
NEW BRUNSWICK							
Minto	hvb	18	2	—	—	—	—
Other	hvb	14	14	1	—	—	—
Subtotal		32	16	1	—	—	—
ONTARIO							
		218	—	—	—	—	—
SASKATCHEWAN							
Estevan	lig	310	497	437	41	519	6,998
Willow Bunch	lig	748	1,044	1,420	68	1,704	10,388
Wood Mountain	lig	278	733	1,114	44	1,447	5,665
Cypress	lig	162	407	465	8	243	461
Subtotal		1,499	2,681	3,436	161	3,913	23,512
ALBERTA							
Plains	sub	30,000	—	102,000	—	—	198,000
Foothills	hvb	1,300	—	7,719	—	—	—
Mountains	lvb-mvb	8,000	—	19,000	—	—	—
BRITISH COLUMBIA							
Southeastern	lvb-mvb	6,266	9,436	36,317	—	—	—
Northeastern	lvb-mvb	996	462	7,719	—	—	—
Other	Mainly lig some sub-hvb	1,845	91	7,439	—	—	—
Canada totals							
	lig	3,562	2,772	10,875	161	3,913	23,512
	sub	30,000	—	102,000	—	—	198,000
	hvb	1,555	559	8,457	3	50	128
	lvb-mvb	15,282	9,898	63,036	—	—	—

Source: Energy Mines and Resources

APPENDIX II

Canadian Coal Imports (All Types)

	<u>1979</u>		<u>1981</u>	
	<u>MILLION TONNES</u>	<u>\$Million</u>	<u>MILLION TONNES</u>	<u>\$Million</u>
U.S.A.	<u>17.54</u>	<u>\$860.08</u>	<u>14.2</u>	<u>\$814.80</u>
TOTAL	17.54	\$860.08	14.2	\$814.80

* excludes anthracite

Canadian Coal Exports

	<u>1980</u>		<u>1981</u>	
	<u>Million Tonnes</u>	<u>Cdn \$Million</u>	<u>Million Tonnes</u>	<u>Cdn \$Million</u>
Belgium/Lux	-	-	.06	5.97
Denmark	.25	15.07	.32	25.13
Germany W.	.60	19.74	.74	33.72
Greece	.31	12.23	-	-
Italy	.05	3.07	.07	5.05
Netherlands	.03	1.80	.08	4.84
Spain	.05	3.02	.05	5.05
Sweden	.19	10.15	.26	19.22
India	.23	12.21	.15	8.87
Pakistan	.02	1.54	.07	4.83
Japan	10.45	588.99	10.85	680.76
Korea/S	1.13	66.22	1.90	125.85
Taiwan	.16	7.60	.30	20.37
Argentina	.04	2.87	.08	5.97
Brazil	.61	38.13	.80	55.82
Chile	.13	7.83	.22	12.93
Mexico	.03	2.09	.23	15.14
U.S.A.	<u>.02</u>	<u>1.05</u>	<u>.12</u>	<u>7.09</u>
	14.31	793.61	16.29	1,036.65

SECTORAL OVERVIEW**FOOD AND BEVERAGE INDUSTRY****SIC 501**

The food and beverage processing industry is the largest industry in Canada, employing more than 245,000 people. The industry is evenly distributed across Canada relative to the population distribution and represents a significant manufacturing sector for every province.

The food system as a whole, including farming, fishing, manufacturing, distribution and retailing, is estimated to employ 1 in 4 of all employed Canadians. It is important to emphasize that the food processing sector is not an adjunct of the agricultural system as it was in the eighteenth century, but rather an important part of the industrial system with significant linkages to other manufacturing industries. Food processing and distribution makes a significantly greater contribution to economic activity than does the domestic output of the farm system; Canadian farms supply only about half the inputs of the food system.

The food processing industry is a remarkably stable industry, both nationally and regionally as the following table on employment shows:

TABLE A: Total Employment in the Food and Beverage Industry
By Province

	<u>1970</u>	<u>1972</u>	<u>1974</u>	<u>1976</u>	<u>1978</u>	<u>1980</u>
Nfld.	6,762	6,456	6,596	7,451	9,845	14,804
P.E.I.	2,094	1,667	1,600	1,446	1,836	2,486
N.S.	10,419	10,207	9,836	10,042	11,039	13,317
N.B.	9,237	9,863	8,830	9,328	9,768	11,162
Quebec	61,080	58,572	56,840	57,775	60,418	61,682
Ontario	84,700	84,003	87,099	83,124	85,096	88,316
Manitoba	11,009	11,185	11,011	11,129	10,809	10,574
Sask.	5,830	6,000	5,900	5,274	5,247	5,467
Alberta	13,307	14,057	14,869	15,615	16,118	16,133
B.C.	17,264	18,417	18,307	18,396	19,671	21,183
Yukon & N.W.T.	66	56	54	66	59	50
Canada	221,768	220,483	220,932	219,646	229,906	245,174

.../2

The stability over the last 10-20 years arises from the relatively steady nature of the demand for food. The industry adapts to consumer demand, the changes in which are due mainly to the following factors:

- population growth (both birth rate and net immigration)
- population age structure (such as children versus adults).
- participation rate (notably the percent of women working away from home)
- income elasticity of demand (more expensive foods as real incomes rise)
- balance of trade in food (exports less imports, which in turn arise from consumer demand)

Over the past 15 years the total real output of the food processing industry has risen by about 6.5% per annum and the total employment by about 2% per annum, the increase in population and the desire for more convenience foods by homemakers having been more than matched by the increased productivity in the industry.

Regional distribution of the industry across Canada has been stable. At this level of aggregation, the only major influence being the increase in fish processing in Eastern Canada as a direct consequence of the extension of Canadian jurisdiction to a 200 mile Exclusive Economic Zone.

International Trade

Exports of food and beverage products reached \$4 billion in 1981 with major markets being the U.S., Japan and the E.E.C.. The food and beverage industry has enjoyed a positive trade balance as Table B indicates. This balance has steadily increased over the past ten years as the ratio of exports to value of shipments has increased from 9.7 to 12.6. Canadian exports, however, represent only 1-3% of world exports, depending on the product. The importance of this industry to total Canadian trade is illustrated by the fact that the manufacturing sector as a whole has experienced a constant deficit.

There are, however, wide differences between sub-sectors. Processed meat and fish products, whisky and flour and breakfast cereals are the leading exports, while processed fruit and vegetables and miscellaneous foods are sub-sectors dominated by imports. Major competitors are primarily countries with similar or more favorable climatic conditions and geography such as the U.S. and the E.E.C.. Major obstacles to trade, such as the national self-sufficiency, income security, and social policies of other countries, often represent barriers which are difficult to overcome in an effort to increase market shares.

- 3 -

TABLE B: Exports, Imports and Trade Balance for
Canadian Food and Beverage Products, 1981

(\$000)

<u>Subsector and 1970 SIC number</u>	<u>Exports</u>	<u>Imports</u>	<u>Trade Balance</u>
501 Total Food & Beverage Products	4,009,740	2,817,580	1,192,160
1011 Meat products	831,121	394,791	436,330
1012 Poultry products	15,543	50,951	(35,408)
1020 Fish Products	1,248,221	362,252	885,969
1031 Fruit & Vegetable Canners	184,112	577,835	(393,723)
1032 Frozen Fruit & Vegetables	72,870	32,599	40,271
1040 Dairy Products	209,349	93,961	115,388
1050 Flour and Breakfast Cereals	297,898	31,657	266,241
1060 Feed	129,417	39,116	90,301
1071 Biscuits	21,851	25,009	(3,158)
1072 Bakeries	39,192	25,267	13,925
1081 Confectionery	43,446	147,588	(104,142)
1082 Cane and Beet Sugar	78,590	35,659	42,931
1083 Vegetable Oil Mills	201,975	193,223	8,752
1089 Miscellaneous Food Processors NES	155,641	449,540	(293,899)
1091 Soft Drink Mfg.	7,755	30,160	(22,405)
1092 Distillers	348,502	139,774	208,728
1093 Breweries	123,315	19,212	104,103
1094 Wineries	942	168,986	(168,044)

Source: Statistics Canada

.../4

Competitive Strengths and Weaknesses

The Canadian food and beverage industry is constrained to a certain degree by its small, static and widely dispersed domestic market. This often inhibits the industry in achieving economies of scale to minimize production costs and maintain its competitiveness in the world context. Similarly, 24% agricultural inputs are under the control of supply-management systems which are often cited as contributing to uncompetitive products. Climatic and geographic conditions limit the types of products which the industry could utilize, however, significant advances in agricultural research have added to the diversity of Canadian raw materials. The food processing industry has and must continue to utilize efficient production techniques, and adapt to changing consumer demands.

All major countries in the world supply most of their food requirements from domestic sources. This is a consequence of the:

- perishability of many forms of food, both processed and fresh
- significance of transport costs in food prices
- desire of national governments to ensure security of supply because of the possibility of war or international economic pressures.
- tariff policies

The above factors ensure that Canada will always have a large domestic food industry. At the same time, because of the size of the industry, relatively small changes at the margin in either imports or exports could have major regional economic development consequences.

Economic Structure

The economic structure of the Canadian industry is similar to that in other economically advanced countries, and the patterns in all major countries are converging. This suggests that underlying economic and technological factors specific to the food industry are far more important than the consequences of government intervention in the system. Here again, one sees a contrast between food processing and agriculture. In the latter case, wide differences occur internationally in farm structures since government involvement in agriculture has had significant effects on farm structures around the world. Governments around the world have intervened in agriculture and fisheries for social

reasons, but have been less concerned with resisting the external forces and resulting changes in the food processing industry.

Foreign Ownership

Foreign ownership in Canada is concentrated in the oligopolistic and marketing dominated sectors of the food industry (tea, coffee, cereals, confectionery, biscuits, etc.). These are the most profitable and most progressive sectors of the industry, owing in the creation of barriers to entry through product differentiation backed up by marketing expenditures. Foreign investment in the "commodity" product areas such as bread baking, meat packing and fish processing (where Unilever, Nestlé, and Beatrice Foods, the 3 largest companies in the world, have all given up their Canadian operations in the last 15 years) has been reduced because these industries have not been able to produce above-average profits.

In the food industry, foreign investment is very much an alternative to international trade. Transportation costs, local regulatory requirements, and relatively significant tariff rates usually result in the decision to engage in local manufacturing rather than in exporting or importing. This is as true for the Canadian owned Multi National Corporations (MNCs such as McCains, Seagrams, Hiram Walker, Canada Packers) as for foreign owned Canadian corporations.

Foreign ownership is associated with relatively high Canadian tariffs, restrictions on imports into Canada and the possibility of creating barriers to entry through product differentiation. It is understandable, therefore, regardless of any other factors, that foreign owned companies are not normally known for their exporting activities, unless they have developed a World Product Mandate for a particular line, or where an increase in output for export results in significantly lower unit costs.

Production Facilities

Production facilities in Canada are more than adequate for meeting the requirements of the Canadian market. When processed food exports are increased, this increases the volume going through existing plants and has the effect of increasing the economic benefits and lowering the costs to consumers. This explains the great emphasis given to the export market, both by government and by some sectors of the industry. There are certain problems in plant scale since the size of the domestic market open to Canadian producers in some sectors is much smaller than for our competitors in international markets (U.S. and E.E.C.). This sometimes leads

.../6

- 6 -

to imports of manufactured foods because the minimal optimal size of plant is far too large for the Canadian domestic market.

Concentration

Food processing, taken separately from beverage processing, shows approximately the same concentration ratio (four-enterprise share of shipments) as total manufacturing, namely about 51%. However, because concentration is much higher in beverage processing (above 80%), the food and beverage industry as a whole has a concentration ratio of about 58%. High-concentration sectors include breweries, distilleries, wineries, vegetable oil mills, sugar refiners, and biscuit manufacturers. Medium-concentration sectors include flour and cereals, frozen fruit and vegetable processors, meat processors, fish processors, and confectionery makers. Low-concentration sectors include epoultry processors, dairies, and bakeries. Over the past 10 years, the concentration ratio has tended to decline in 8 of the 13 food sectors and to increase in 3 of the 4 beverage sectors. Declines in concentration have usually been facilitated by relatively rapid growth of the sectors in question.

Profits and Investment

Profitability in food and beverage processing has tended to be more stable and slightly higher than in total manufacturing. As a percent of shareholders' equity, after-tax profits have averaged about 12% during the late 1970s and early 1980s and remain at almost that level even in 1982. In constant dollar terms, however, aggregate profits of the industry have been declining since the mid-1970s. Similarly, in constant dollar terms, the industry's capital spending has been declining since the mid-1970s. Despite the recent declines in profits and capital spending, however, and despite the intensified squeeze in 1982, most of the larger food and beverage companies have indicated that they could readily raise money from internal and external sources if the sales uptrend would resume or if new specific opportunities arose, including opportunities for import replacement and exports.

Labour Characteristics

Union members represent about 50% of employees in food processing and about 37% in beverage processing. The unionized proportion of employees is highest in fish processing (86%), bakery production (60%), and meat processing (58%). The three largest unions, in terms of members employed in food and beverage processing, are the "Food Workers" (United Food and Commercial Workers -- AFL-CIO/CLC), the

.../7

"Teamsters" (International Brotherhood of Teamsters -- Independent), and the "Bakery Workers" (Bakery, Confectionery and Tobacco Workers International Union -- AFL-CIO/CLC).

Wage Rates

Compensation per person employed in food and beverage processing has advanced at a little over 11% annually in the past five years. With the rate of productivity growth having slowed to just over 1% annually during the same period, the rise in wage rates has driven up unit labour costs by a little more than 10% annually. Wage rates in the various food and beverage sectors tend to be somewhat higher in Western Canada than in Central as well as Eastern Canada. The industry has expressed itself in support of the government's 6-5 percent program.

Location

Location of the industry has been, and is, determined by a number of factors but relative transportation costs dominate the location decision. The food industry is essentially a high volume, low unit profit industry (as seen above, the more significant measure of return on capital is relatively good). The low unit of profit can be wiped out by a bad locational decision that does not minimize transportation costs. This means that it is very difficult to influence location through the use of incentive grants. This is a world-wide phenomenon. Some sub-sectors of the industry will locate at the source of raw material supply for perishability reasons (fish, fruit and vegetable). Some because the nature of the processing operation "bulking down", that is to say, the final output is much smaller in size/ level than the raw materials that are required to produce a unit of final output (wineries, cheese, sugar, beet refining). More of the sub-sectors locate near the market, because the process consists of "bulking up" (bread, beer, breakfast cereals) or because a variety of ingredients from different sources need to be used (confectionery, TV dinners and many miscellaneous foods), or because the packaging elements account for a large part of the final dimensions of the product.

Location of industrial plants has been much more strongly influenced by government horizontal policies both in the transportation area (Crow rates, Feed Freight Assistance) and in the allocation by quota specific to a region or province of marketing boards (industrial milk, poultry, eggs) than by incentive grants or "jaw-boning".

The following list gives a breakdown by locational factors but, it should be emphasized that a number of exceptions to this particular classification that have arisen for entrepreneurial and historical reasons and sometimes from provincial government intervention.

- 8 -

Locational Factors

Market Oriented*

Tea, coffee, cocoa
Breakfast cereal
Brewing
Sugar refining
(cane)
Bakeries
Fluid milk
processing
Processed meats
Distilleries
Soft Drinks
Confectionery
Biscuits
Flour milling

Raw Material Supply
Oriented

Fruit and Vegetable
Fish processing
Wineries
Sugar refining (beet)
Cheese and butter

Mixed Influence
(Mostly Government
Transportation Policy)

Meat
slaughtering
Vegetable Oils

* Market Oriented Industries where a single plant normally can supply the whole of a company's Canadian requirements.

- Breakfast Cereals
- Confectionery
- Biscuits
- Sugar Refining (cane)
- Distilleries

Market Oriented Industries that supply local markets but where a company has plants across Canada.

- Fluid Milk
- Bakeries
- Soft Drinks
- Breweries

Research and Development

The food industry is very mature, and the basic technology was developed anything between 5 years and 2,000 years ago.

Because the industry is so mature the potential for high returns to research are relatively low. Research and Development as a percentage of sales (a not very useful concept) is therefore low compared with other industries. However, there is no evidence to suggest that Canada's food manufacturing industry is badly disadvantaged vis-à-vis its international competitors.

.../9

- 9 -

A detailed analysis of manufactured food imports into Canada, fails to identify any significant volumes of imports embodying superior foreign technology. The factors leading to the importation of most highly sophisticated food products result from scale economies ruling out Canadian production.

Innovative developments in the food industry tend to arise from supply industries such as equipment manufacturers. This will be of particular importance in the medium term, as the focus of food manufacturers will be increasingly directed towards cost reduction through productivity improvement and process control.

National Sectoral Policies

There has not been any national sectoral development policy on the part of government, although government horizontal policies have impacted significantly on the industry. Specific sectoral policies applied to the farming and fishing sectors have influenced the economic performance of sectors and the location of the industry. The private sector of the food industry, which accounts for the overwhelming share of volume of output (Freshwater Fish Marketing Corporation, Canadian Salt Fish Corporation are examples of public sector processing), has developed a number of different corporate development strategies.

The Government's recently announced Agri-Food Strategy does deal, in part, with food processing, but as yet no implementation plans have been announced that would clearly affect the private sector.

The Agri-Food Strategy, which represents more than just the interests of the Canada Department of Agriculture (the lead department), envisages a significant rise in agricultural output of nearly 60% by the year 2000, with rapidly rising exports. Processed foods and agricultural products are both expected to increase in volume and in real price, based on more R&D activities and greater emphasis on both export and domestic market opportunities. There is every reason to believe that these results can be accomplished, but the current recession in the economy, combined with increasing protectionist pressures in the international trade in foodstuffs, suggest that there will be considerable difficulty in achieving substantial results in the next few years.

National sectoral policies in the agriculture and fisheries sector that have already been put into place by the Canadian Government have been aimed at improving the lot of farmers and fishermen. These policies (for example, over-the-side selling

.../10

- 10 -

of fish, restrictive output quotas in milk, eggs and poultry, and pricing policies and provincial output quotas for a number of products) have sometimes had an unfavourable effect on the manufacturing sector, although no doubt there has been a net benefit to the country as a whole and to the primary sector in particular. Again, it must be emphasized that while there are many close linkages between the primary and manufacturing sectors, gains for one sector are not infrequently accompanied by losses to another sector. It is important that the interests of processors and of regional groups are put forward in the early stages of sectoral policy formulation by the primary departments.

Medium Term Outlook

The food and beverage processing industry has been hit harder by this recession than by any previous recession since the second world war. Industry shipments, in real terms, were down about 10% in the first seven months of 1982. After-tax profits in the industry -- apart from the distillery sector, which had an irregular increase -- were, in real terms, down 25-50 percent in almost every sector during the first half of 1982. The industry's capital expenditures, in real terms, after falling about 4% in 1981, are expected to drop further by more than 10% in 1982. Employment in the industry, however, after rising a little in 1981, is not expected to fall more than marginally in 1982 and 1983. No significant layoffs have been announced. Industry selling prices in recent months have been running less than 6% above a year earlier. For the next five years the outlook is considered to be unencouraging by most observers and by most participants in the industry. Population growth is slowing down, the participation rate is no longer rising rapidly, and the recession is biting into food spending. Competition is becoming fierce as every country looks to export markets to assist food industry prospects. There are, however, opportunities for the food processing sector. Exports, as the Agri-Food Strategy pointed out, can be expected to increase, especially when the world economy picks up and the effect of income elasticity of demand in the Newly Industrialised Countries (NIC's) takes effect and results in a rapid up-grading of diets. Canada has an excellent resource base, a well developed scientific and R&D infrastructure, and a good range of high quality food products.

The food industry, as a whole, has adequate management capabilities and sufficient investment funds available to take advantage of any viable opportunities as judged by current industry expectations. An adequate supply of raw materials, both from domestic and foreign sources, can be called forth if prices are reasonable.

.../11

- 11 -

In so far as the problems arising from the Crow Rate can be adequately resolved, and Feed Freight Assistance can be applied in a way that does not disadvantage any particular group, a steady growth in export performance and in import substitution can be expected to take place in some sectors.

In the international trade area moves are already afoot in the GATT to combat the rising tide of protectionism, and there is the possibility of bargaining for lower tariffs on Canadian processed foods. It should be noted, however, that Canadian farmers and processors, are looking for more protection from Government, which makes bargaining with foreign governments that much more difficult and that much less likely to be successful. It would be unwise to expect much in the way of benefits over the next five years from tariff negotiations.

In this context it might be noted that the farmers in Canada benefit from trade restrictions imposed by the Canadian Government and these acts may have the effect of reducing the volume throughput of food plants and potential for exports. The Canadian cheese and poultry sectors are interesting examples of the inter-play of competing interests in the food system. The technological trend in the food industry in the 1980's will be a greater emphasis on cost reduction and process control compared with the emphasis in the 60's and 70's on new product development particularly in the convenience food sector.

Interprovincial Issues

Nearly all the provincial governments of Canada give great emphasis to the development of the local (provincial) food industry. Given the poor prospect of volume growth of food products over the next 5 years, it is almost certain that the increases occurring in one province will be at the expense of another province, unless substantial new export markets can be found as happened in the fish processing sector. The sharp reaction of Eastern farmers and some processors to the Gilson proposals to deal with the Crow illustrate the latest provincial antagonisms in seeking out the transfer of processing activity from one region to another.

In so far as provincial initiatives seek trade and manufacturing job creation activities, the rivalry is likely to be relatively friendly. However, to the extent that provincial program activity (Federal and Provincial) results in trade diversion and job transfer this is likely to be particularly troublesome for food processing, given the shared jurisdiction previously referred to. Marketing Board legislation and food and agriculture judgements form a large

.../12

- 12 -

(if not the major) part of Constitutional Law precedents. The problems usually arise in the primary sector but wash over into manufacturing, and there is, as yet, no sign of diminishing provincial interest in food self-sufficiency, despite the attempts by Agriculture Canada to provide firm leadership in this field.

Policy Implications

Generalisations (to which there are always exceptions) to be borne in mind include the following:

Funds for the industry should be directed towards cost reduction and productivity rather than volume expansion and additional facilities.

Incentive grants are unlikely to be as effective in the food industry in securing regional re-location as in some other industries.

Government horizontal policies, decided in Ottawa, are likely to dominate regional changes and increases in food industry employment (Crow Rate, Feed Freight Assistance, Marketing Board operations both quota and price setting, determination and allocation of fishing quotas).

Program activity will result in more efficient industries, and the economic benefits will come in the form of lower local prices, more consumer satisfaction, and a better industrial infrastructure.

Increases in exports are one of the most hopeful thrusts for the food industry. This would be based on improvements in efficiency, supported by program activity, rather than on new marketing organizations. Export led recovery in the food industry is a strong possibility.

Improvements in trade access and tariff reductions, while desirable, do not appear to offer great promise in the medium term.

The above factors suggest that once having taken into account the necessary preservation of essential companies, DRIE policy should shift away from burdensome paperwork requirements, away from the primary sectors, away from emphasis on R & D or on innovation in the R & D sense, and in the direction of emphasis on the manufacturing sectors, on productivity growth through process, work-flow, and human-skill development, on aggressive or imaginative entrepreneurship at home or aimed abroad, and on skill in perceiving potential benefits to be captured from the many unexpected sociological trends that are bound to keep emerging in diverse sectors of the food and beverage industry.

.../13

- 13 -

The accomplishment of such a strategy and of success in the shifting of program activities from existing patterns to those suggested above would require a more active or initiating kind of role for the assistance programs and the officers administering them. New opportunities for businesses and for government assistance to them are apt to arise in unusual and unexpected ways, and government research and program officers should be in a position to keep their eyes and ears in closer touch with the actual business world.

Although research, monitoring, and personal-contact initiatives ought probably to be focused on the more advanced, higher value-added food areas, it should be emphasized that unusual and often unexpected opportunities for import replacement or exports can arise in almost any of the food and beverage processing sectors.

British Columbia

Provincial Shares of National Totals
in Subsectors of Food and Beverage Processing, 1980
(Population of British Columbia = 11% Canada Total)

Provincial as Share of National

<u>Processing sector</u>	<u>Shipments</u> ((\$000))	<u>Share of national</u> (%)	<u>Value added</u> ((\$000))	<u>Share of national</u> (%)	<u>Employees</u> (No.)	<u>Share of national</u> (%)
Total food and beverage	2,172,106	7.7	732,674	7.9	21,183	8.6
Meat	324,944	4.7	77,554	6.5	2,302	6.4
Poultry	90,217	9.1	20,044	8.9	898	8.9
Fish	329,496	22.5	100,036	20.9	5,181	13.9
Fruit & Veg.	173,870	11.2	56,303	8.5	1,972	11.2
Dairy	329,875	7.6	64,351	6.8	2,390	9.2
Flour & Cereal	0		0		0	
Feed	146,826	6.4	24,982	6.1	629	6.5
Biscuits	*		*		*	
Bakeries	115,119	9.7	66,222	10.7	2,403	9.2
Confectionary	16,068	2.1	8,126	2.2	299	3.0
Sugar	*		*		*	
Veg. Oil	0		0		0	
Misc. Food Processors	256,348	8.9	76,534	6.8	1,515	6.3
Soft Drinks	*		*		*	
Distillers	52,954	7.8	35,383	8.4	397	7.2
Breweries	122,435	10.2	84,820	10.1	1,348	10.9
Wine	48,906	28.8	25,038	28.6	337	25.7

* Confidential

SOURCE: STATISTICS CANADA

Alberta

Provincial Shares of National Totals in Subsectors of Food and Beverage Processing, 1980 (Population of Alberta = 8.7% Canada Total)

Provincial as Share of National

<u>Processing sector</u>	<u>Ship- ments</u> (\$000)	<u>Share of national</u> (%)	<u>Value added</u> (\$000)	<u>Share of national</u> (%)	<u>Employ- ees</u> (No.)	<u>Share of national</u> (%)
Total food and beverage	3,025,456	10.7	601,516	6.5	16,133	6.6
Meat	1,565,983	22.5	105,033	8.9	5,552	15.5
Poultry	85,175	11.5	25,842	8.6	983	9.7
Fish	*		*		*	
Fruit & Veg.	*		*		*	
Dairy	305,811	7.1	78,827	8.4	2,146	8.2
Flour & Cereal	81,137	8.8	12,356	4.9	406	7.9
Feed	232,576	10.2	40,145	9.8	969	10.1
Biscuits	*		*		*	
Bakeries	90,456	7.6	50,723	8.2	1,826	7.0
Confectionary	*		*		*	
Sugar						
Veg. Oil	*		*		*	
Misc. Food Processors	134,432	4.7	50,009	4.4	978	4.0
Soft Drinks	91,680	8.5	39,907	8.3	1,111	8.4
Distillers	*		*			
Breweries	51,907	4.3	32,325	3.8	584	4.7
Wine	*		*		*	

* Confidential

SOURCE: STATISTICS CANADA

Saskatchewan

Provincial Shares of National Totals
in Subsectors of Food and Beverage Processing, 1980
(Population of Saskatchewan = 4% Canada Total)

Provincial as Share of National

<u>Processing sector</u>	<u>Shipments</u> ((\$000))	<u>Share of national</u> (%)	<u>Value added</u> ((\$000))	<u>Share of national</u> (%)	<u>Employees</u> (No.)	<u>Share of national</u> (%)
Total food and beverage	766,615	2.7	207,582	2.2	5,467	2.2
Meat	290,771	4.2	60,801	5.1	1,401	3.9
Poultry	*		*		*	
Fish	*		*		*	
Fruit & Veg.	*		*		*	
Dairy	*		*		*	
Flour & Cereal	*		*		*	
Feed	54,752	2.4	12,746	3.1	333	3.5
Biscuits	*		*		*	
Bakeries	28,113	2.4	15,776	2.6	624	2.4
Confectionary	*		*		*	
Sugar	0		0		0	
Veg. Oil	*		*		*	
Misc. Food Processors	*		*		*	
Soft Drinks	31,206	2.9	16,891	3.5	525	3.9
Distillers	*		*		*	
Breweries	37,884	3.1	24,426	2.9	398	3.2
Wine	*		*		*	

* Confidential

SOURCE: STATISTICS CANADA

Manitoba

Provincial Shares of National Totals
in Subsectors of Food and Beverage Processing, 1980
(Population of Manitoba = 4.3% Canada Total)

<u>Provincial as Share of National</u>						
<u>Processing sector</u>	<u>Ship-ments</u> ((\$000))	<u>Share of national</u> (%)	<u>Value added</u> ((\$000))	<u>Share of national</u> (%)	<u>Employ-ees</u> (No.)	<u>Share of national</u> (%)
Total food and beverage	1,308,700	4.6	374,878	4.0	10,574	4.3
Meat	470,928	6.8	71,387	6.0	2,876	8.0
Poultry	59,813	6.0	15,216	6.8	698	6.9
Fish	*		*		*	
Fruit & Veg.	76,480	4.9	30,127	4.9	816	4.6
Dairy	144,167	3.3	37,129	3.9	1,098	4.2
Flour & Cereal	61,433	6.6	11,012	4.3	417	8.1
Feed	106,251	4.7	18,469	4.5	466	4.8
Biscuits	*		*		*	
Bakeries	43,979	3.7	24,094	3.9	1,001	3.8
Confectionary	*		*		*	
Sugar	*		*		*	
Veg. Oil	*		*		*	
Misc. Food Processors	85,287	3.0	24,416	2.2	791	3.3
Soft Drinks	48,938	4.6	24,766	5.2	632	4.8
Distillers	*		*		*	
Breweries	39,497	3.3	25,517	3.0	426	3.4
Wine	*		*		*	

* Confidential

SOURCE: STATISTICS CANADA

Ontario

**Provincial Shares of National Totals
in Subsectors of Food and Beverage Processing, 1980
(Population of Ontario = 35.8% Canada Total)**

<u>Provincial as Share of National</u>						
<u>Processing sector</u>	<u>Ship-ments</u> ((\$000)	<u>Share of national</u> (%)	<u>Value added</u> ((\$000)	<u>Share of national</u> (%)	<u>Employ-ees</u> (No.)	<u>Share of national</u> (%)
Total food and beverage	11,292,187	39.9	4,043,111	43.7	88,316	36.0
Meat	2,600,887	37.4	603,146	50.9	13,504	37.6
Poultry	372,749	37.7	79,607	35.5	3,460	34.2
Fish	*		*		*	
Fruit & Veg.	842,016	54.2	329,668	53.4	9,241	52.6
Dairy	1,484,237	34.4	329,847	35.1	8,741	33.5
Flour & Cereal	492,808	53.4	161,768	63.5	3,180	61.5
Feed	711,849	31.2	168,596	41.2	3,451	35.8
Biscuits	174,744	46.8	82,026	44.2	3,081	45.9
Bakeries	415,139	34.9	198,538	32.2	9,374	35.9
Confectionary	565,077	72.5	272,935	72.5	7,143	71.2
Sugar	*		*		*	
Veg. Oil	368,870	50.7	40,925	47.6	431	29.5
Misc. Food Processors	1,629,017	56.6	636,695	56.6	13,222	54.6
Soft Drinks	425,820	39.7	187,711	39.1	4,665	35.1
Distillers	377,665	55.6	242,158	57.4	3,051	55.4
Breweries	484,315	40.2	359,599	42.7	3,876	31.4
Wine	73,208	43.1	41,367	47.3	585	44.5

* Confidential

SOURCE: STATISTICS CANADA

Quebec

**Provincial Shares of National Totals
in Subsectors of Food and Beverage Processing, 1980
(Population of Quebec = 26.4% Canada Total)**

<u>Provincial as Share of National</u>						
<u>Processing sector</u>	<u>Ship-ments</u> ((\$000))	<u>Share of national</u> (%)	<u>Value added</u> ((\$000))	<u>Share of national</u> (%)	<u>Employ-ees</u> (No.)	<u>Share of national</u> (%)
Total food and beverage	7,433,248	26.2	2,396,246	25.9	61,682	25.1
Meat	1,547,179	22.3	236,909	20.0	9,035	25.1
Poultry	294,832	29.8	67,477	30.1	3,070	30.3
Fish	106,042	7.2	43,922	9.2	3,184	8.6
Fruit & Veg.	215,370	13.9	84,644	13.7	2,538	14.4
Dairy	1,673,869	38.8	331,959	35.3	8,198	31.5
Flour & Cereal	193,313	20.9	45,553	17.9	760	14.7
Feed	918,939	40.3	130,300	31.9	3,383	35.1
Biscuits	168,673	45.2	92,832	50.0	2,795	41.7
Bakeries	414,620	34.9	219,963	35.7	9,014	34.6
Confectionary	155,228	19.9	73,007	19.4	1,793	17.9
Sugar	182,219	23.4	33,606	23.7	958	37.3
Veg. Oil	0		0		0	
Misc. Food Processors	683,140	23.7	302,035	26.8	6,380	26.4
Soft Drinks	316,066	29.5	145,574	30.3	4,206	31.7
Distillers	164,601	24.2	93,441	22.1	1,503	27.3
Breweries	365,290	30.3	256,641	30.5	4,638	37.6
Wine	31,047	18.3	13,477	15.4	188	14.3

* Confidential

SOURCE: STATISTICS CANADA

New Brunswick

**Provincial Shares of National Totals
in Subsectors of Food and Beverage Processing, 1980
(Population of New Brunswick = 2.9% Canada Total)**

Provincial as Share of National

<u>Processing sector</u>	<u>Ship- ments (\$000)</u>	<u>Share of national (%)</u>	<u>Value added (\$000)</u>	<u>Share of national (%)</u>	<u>Employ- ees (No.)</u>	<u>Share of national (%)</u>
Total food and beverage						
Meat	69,804	1.0	13,869	1.2	553	1.5
Poultry	*					
Fish	172,191	11.7	57,818	12.1	5,121	13.8
Fruit & Veg.	*		*		*	
Dairy	63,945	1.5	16,945	1.8	648	2.5
Flour & Cereal	0		0		0	
Feed	32,009	1.4	2,130	.5	147	1.5
Biscuits	0	0	0	0	0	0
Bakeries	32,361	2.7	15,460	2.5	709	2.7
Confectionary	*		*		*	
Sugar	*		*		*	
Veg. Oil	0		0		0	
Misc. Food Processors	32,100	1.1	10,180	.9	554	2.3
Soft Drinks	29,152	2.7	9,732	2.0	441	3.3
Distillers	*		*		*	
Breweries	*		*		*	
Wine	*		*		*	

* Confidential

SOURCE: STATISTICS CANADA

Nova Scotia

Provincial Shares of National Totals
in Subsectors of Food and Beverage Processing, 1980
(Population of Nova Scotia = 3.6% Canada Total)

Provincial as Share of National

<u>Processing sector</u>	<u>Ship- ments (\$000)</u>	<u>Share of national (%)</u>	<u>Value added (\$000)</u>	<u>Share of national (%)</u>	<u>Employ- ees (No.)</u>	<u>Share of national (%)</u>
Total food and beverage						
Meat	*		*		*	
Poultry	*		*		*	
Fish	376,354	25.7	104,675	21.9	7,973	21.4
Fruit & Veg.	41,748	2.7	15,163	2.5	739	4.2
Dairy	126,624	2.9	35,946	3.8	1,233	4.7
Flour & Cereal	0		0		0	
Feed	62,887	2.7	8,923	2.2	220	2.3
Biscuits	0		0		0	
Bakeries	32,573	2.7	17,092	2.8	754	2.9
Confectionary	*		*		*	
Sugar	0		0		0	
Veg. Oil	0		0		0	
Misc. Food Processors	*		*		*	
Soft Drinks	29,807	2.8	12,263	2.5	416	3.1
Distillers	*		*		*	
Breweries	*		*		*	
Wine	*		*		*	

* Confidential

SOURCE: STATISTICS CANADA

Newfoundland

**Provincial Shares of National Totals
in Subsectors of Food and Beverage Processing, 1980
(Population of Newfoundland = 2.4% Canada Total)**

Provincial as Share of National

<u>Processing sector</u>	<u>Ship- ments (\$000)</u>	<u>Share of national (%)</u>	<u>Value added (\$000)</u>	<u>Share of national (%)</u>	<u>Employ- ees (No.)</u>	<u>Share of national (%)</u>
Total food and beverage						
Meat	*		*		*	
Poultry	*		*		*	
Fish	350,970	23.9	128,872	27.0	13,117	35.2
Fruit & Veg.	0		0		0	
Dairy	*		*		*	
Flour & Cereal	0		0		0	
Feed	*		*		*	
Biscuits	*		*		*	
Bakeries	15,886	1.3	7,612	1.2	321	1.2
Confectionary	0		0		0	
Sugar	0		0		0	
Veg. Oil	0		0		0	
Misc. Food Processors	*		*		*	
Soft Drinks	*		*		*	
Distillers	0		0		0	
Breweries	*		*		*	
Wine	0		0		0	

* Confidential

SOURCE: STATISTICS CANADA

Prince Edward Island

Provincial Shares of National Totals
in Subsectors of Food and Beverage Processing, 1980
(Population of Prince Edward Island = .5% Canada Total)

Provincial as Share of National

<u>Processing sector</u>	<u>Shipments</u> <u>(\$000)</u>	<u>Share of national</u> <u>(%)</u>	<u>Value added</u> <u>(\$000)</u>	<u>Share of national</u> <u>(%)</u>	<u>Employees</u> <u>(No.)</u>	<u>Share of national</u> <u>(%)</u>
Total food and beverage						
Meat	*		*		*	
Poultry	*		*		*	
Fish	48,720	3.3	16,037	3.3	1,307	3.5
Fruit & Veg.	0		0		0	
Dairy	51,055	1.2	11,313	1.2	353	1.3
Flour & Cereal	0		0		0	
Feed	*		*		*	
Biscuits	0		0		0	
Bakeries	*		*		*	
Confectionary	0		0		0	
Sugar	0		0		0	
Veg. Oil	0		0		0	
Misc. Food Processors	0		0		0	
Soft Drinks	*		*		*	
Distillers	0		0		0	
Breweries	0		0		0	
Wine	0		0		0	

* Confidential

SOURCE: STATISTICS CANADA

Fruit and Vegetables Products

Employment and Value Added in Subsectors of Food and Beverage Processing 1971 and 1980

	<u>Employees</u> (No.)	<u>Current dollar manufacturing value added</u> (\$000)	<u>Industry selling price index</u> (1971 = 100)	<u>Constant dollar manufacturing value added</u> (1971 \$000)
1971	18,185	224,632	100.0	224,632
1980	17,570	616,987	218.3	282,633
Percent increase 1971-80	-3.5	174.7	118.3	25.8

Source: Statistics Canada

Dairy Products

Employment and Value Added in Subsectors of Food and Beverage Processing 1971 and 1980

	<u>Employees</u> (No.)	<u>Current dollar manufacturing value added</u> (\$000)	<u>Industry selling price index</u> (1971 = 100)	<u>Constant dollar manufacturing value added</u> (1971 \$000)
1971	29,855	375,700	100.0	375,700
1980	26,057	940,711	222.9	422,033
Percent increase 1971-80	-14.6	150.4	122.9	12.3

Source: Statistics Canada

Fish Products

Employment and Value Added in Subsectors of Food and Beverage Processing 1971 and 1980

	<u>Employees</u> (No.)	<u>Current dollar manufacturing value added</u> (\$000)	<u>Industry selling price index</u> (1971 = 100)	<u>Constant dollar manufacturing value added</u> (1971 \$000)
1971	18,510	143,922	100.0	143,922
1980	24,085	477,991	299.3	159,703
Percent increase 1971-80	30.1	232.1	199.3	11.0

Source: Statistics Canada

Meat Products

Employment and Value Added in Subsectors of Food and Beverage Processing 1971 and 1980

	<u>Employees</u> (No.)	<u>Current dollar manufacturing value added</u> (\$000)	<u>Industry selling price index</u> (1971 = 100)	<u>Constant dollar manufacturing value added</u> (1971 \$000)
1971	31,332	403,711	100.0	403,711
1980	35,912	1,184,547	243.7	486,068
Percent increase 1971-80	14.6	193.4	143.7	20.4

Source: Statistics Canada

**Provincial Shares of Value Added in
Canadian Food and Beverage Processing
1971 and 1980**

	1971		1980	
	<u>Value Added (\$000)</u>	<u>Share of national (%)</u>	<u>Value added (\$000)</u>	<u>Share of national (%)</u>
P.E.I.	*)		*)	
))	
Newfoundland	*)		*)	
)	6.8)	9.8
Nova Scotia	*)		*)	
))	
New Brunswick	*)		*)	
Quebec	851,062	26.9	2,396,246	25.9
Ontario	1,394,438	44.1	4,043,111	43.7
Manitoba	132,939	4.2	374,878	4.0
Saskatchewan	76,220	2.4	207,582	2.2
Alberta	201,324	6.4	601,516	6.5
British Columbia	260,168	8.2	732,674	7.9
Yukon and N.W.T.	0	0	0	0
Canada	3,160,060	100.0	9,260,176	100.0

* Confidential

SOURCE: STATISTICS CANADA

**Provincial Shares of Value Added in
Canadian Meat Products Industry
1971 and 1980**

	1971		1980	
	<u>Value Added (\$000)</u>	<u>Share of national (%)</u>	<u>Value added (\$000)</u>	<u>Share of national (%)</u>
P.E.I.	*)		*)	
))	
Newfoundland	*)		*)	
)	3.0)	2.6
Nova Scotia	*)		*)	
))	
New Brunswick	*)		*)	
Quebec	89,878	22.3	236,909	20.0
Ontario	143,432	35.5	603,146	50.9
Manitoba	35,936	8.8	71,387	6.0
Saskatchewan	23,113	5.7	60,801	5.1
Alberta	74,090	18.4	105,033	8.9
British Columbia	25,402	6.3	77,554	6.5
Yukon and N.W.T.	0	0	0	0
Canada	403,711	100.0	1,184,547	100.0

* Confidential

SOURCE: STATISTICS CANADA

**Provincial Shares of Value Added in
Canadian Dairy Products Industry
1971 and 1980**

	1971		1980	
	<u>Value Added</u> (\$000)	<u>Share of national</u> (%)	<u>Value added</u> (\$000)	<u>Share of national</u> (%)
P.E.I.	2,178	.6	11,313	1.2
Newfoundland	*	*	*	*
Nova Scotia	11,640	3.1	35,946	3.8
New Brunswick	6,841	1.8	16,945	1.8
Quebec	132,283	35.2	331,959	35.3
Ontario	134,306	35.7	329,847	35.1
Manitoba	12,781	3.4	37,129	3.9
Saskatchewan	12,235	3.3	*	*
Alberta	28,250	7.5	78,827	8.4
British Columbia	32,465	8.6	64,351	6.8
Yukon and N.W.T.	0	0	0	0
Canada	375,700	100.0	940,711	100.0

* Confidential

SOURCE: STATISTICS CANADA

**Provincial Shares of Value Added in
Fruit and Vegetable Processing Industries
1971 and 1980**

	1971		1980	
	<u>Value Added (\$000)</u>	<u>Share of national (%)</u>	<u>Value added (\$000)</u>	<u>Share of national (%)</u>
P.E.I.	1,172	.5	*	*
Newfoundland	*	*	0	0
Nova Scotia	4,404	2.0	15,163	2.5
New Brunswick	*	*	*	*
Quebec	37,024	16.5	84,644	13.7
Ontario	136,702	60.8	329,668	53.4
Manitoba	10,496	4.7	30,127	4.9
Saskatchewan	*	*	*	*
Alberta	*	*	*	*
British Columbia	17,435	7.8	51,537	8.3
Yukon and N.W.T.	0	0	0	0
Canada	224,632	100.0	616,987	100.0

* Confidential

SOURCE: STATISTICS CANADA

SECTORAL OVERVIEW

Slaughter and Meat Processors S.I.C. 1011

Sector Definition

Establishments primarily engaged in abattoir and meat processing operations. Important products of this industry are fresh (including frozen) meats, cured meats, sausage products, canned meats, animal oils and fats and rendering by-products such as bone meal and meat meal, hides and skins and some pharmaceuticals.

Industry Structure

The industry is the largest food industry in Canada, its shipments in 1978 accounting for more than 26.5% of the total food and beverage industry shipments (excluding vegetable oil mills). With 36,000 employees it ranks as a major employer in most regions of the country. The majority of establishments operate under the federal Meat Inspection Act. On January 1, 1981 there were 417 establishments in this sector registered under the Act. The Census of Industry for 1980 reports on 524 establishments including non-federally inspected plants distributed:

	<u>Establish- ments</u>	<u>Employees</u>	<u>\$'000 Sales</u>
Newfoundland	4	-	73,720
Prince Edward Island	5		
Nova Scotia	9		
New Brunswick	6	553	69,804
Quebec	142	9,035	1,547,179
Ontario	189	13,504	2,600,887
Manitoba	37	2,876	470,928
Saskatchewan	39	1,401	290,771
Alberta	72	5,552	1,565,983
British Columbia	44	2,302	324,944
	524	(417)	6,944,216

(Stats Can. 32-221 and Unpublished Ag. Can.)

These vary in size from 225 establishments employing less than five to 13 with over 500 employees.

Sales volume in 1980 of \$6,944 million includes value-added of \$1,258 million.

- 2 -

The plants vary in function. There are three in Alberta that slaughter and ship cattle only and six in Quebec that slaughter and ship hogs only. From those basic slaughtering establishments to the small steak specialty plant there are plants that perform unending combinations of one or more of the following operations: wholesale cutting, boning, curing and smoking, sausage making, canning, patty making, portion cutting, rendering, etc.

A breakdown of the involvement of individual firms in the total industry is not available. It is therefore not possible to determine the size or ranking of firms or regions in the manufacturing aspect of the industry other than as provided by slaughtering. These, of course, do not represent the total industry as some firms do not slaughter and others slaughter only. Some plants slaughter only one species while others handle two or more.

Reviewing the industry on the basis of the two major species:

Regionally the slaughter was distributed:

<u>Region</u>	<u>Cattle</u>		<u>Hogs</u>	
	<u>Plants</u>	<u>%</u>	<u>Plants</u>	<u>%</u>
Atlantic	8	1.51	8	3.62
Quebec	21	7.16	19	35.96
Ontario	23	32.47	10	31.62
Manitoba	6	9.89	5	8.86
Saskatchewan	4	6.06	3	4.54
Alberta	14	40.89	7	13.67
British Columbia	<u>6</u>	<u>1.99</u>	<u>4</u>	<u>1.70</u>
	82	100.00	56	100.00

The ten largest plants slaughtered 48.9% of the cattle processed in 82 federally inspected plants and 48.65% of the hogs in 56 federally inspected plants. Of the ten largest beef plants, seven are in Alberta with one each in Ontario, Manitoba and Saskatchewan. The larger hog plants are distributed, four each in Ontario and Quebec and one each in Alberta and Saskatchewan.

The Slaughtering facilities are concentrated in livestock production areas whereas the bulk of the processing facilities, i.e. curing, smoking, sausage making, prepackaging, hotel and restaurant preparation are located in the areas of population density, Toronto-Kitchener, and Montreal - Laval.

- 3 -

The industry has some seasonality in some products such as the summer hot dog and barbecue season and the festive hams of Easter and Christmas, but the flow of livestock through the system is relatively evenly distributed throughout the year. There have been cycles of livestock production in the past that tended to create problems of overexpanded capacity to serve the peaks and non profitable pressure to use this capacity in periods of livestock decline. Cattle cycles have been about 10 to 12 years from peak to peak while hog cycles are a shorter three to four years.

Although the cattle cycle was expected to bottom last year, the July 1982 inventory reports further decline from the 1976 peak. No sharp up turn is projected. The next peak in the cycle is not expected until 1987 or beyond. The current economic situation has not encouraged herd expansion. Hog numbers are slightly below the peak of 1980 but no major cyclical shifts are predicted and as the bulk of the production is large scale, "boom and bust" cycles are not expected.

Competitive strengths

Basically the meat processing industry is a domestic industry, geared to process locally raised livestock for the domestic market. Export sales have generally been residual sales i.e. products for which a domestic market does not exist or for which the export price is higher than the domestic return. For most exports the price is determined in the export market and Canada's competitive position is rated against exporters of similar products and its ability to deliver quantity, quality and price.

The major portion of export trade in the meat products sector consists of partially processed raw materials, e.g., bone in and boneless pork cuts, beef carcasses, boneless beef. In addition there are substantial sales of by-products such as fancy meats, tallow and hides. A much smaller trade is carried on in processed meat products.

The bulk of the meat trade is with the U.S.A., Japan, EEC, and the Caribbean.

Summary of Trade - Meat \$ million

	<u>Imports</u>	<u>Exports</u>	<u>Trade Balance</u>
1974	220.8	223.3	2.5
1975	218.7	241.9	23.2
1976	372.5	313.9	-59.2
1977	333.1	371.9	38.8
1978	393.3	487.3	94.0
1979	413.5	679.0	265.5
1980	348.3	731.6	393.3
1981	425.9	860.5	434.6

Source: StatsCan 65-004 and 65-007

- 4 -

The above figures include fancy meats, tallow and hides. Major imports are boneless beef and fully processed meat products, but during low production years in the pork cycle there have been heavy imports of pork cuts.

Although some change in prices is reflected in these figures the major change in recent years is occasioned by reduced pork imports from the U.S.A. and increased exports to that market.

The exception to the general comment on export sales being residual is the development of the Japanese market which now handles 20% of Canadian pork production. The establishing of Canada's place in that market has contributed to the growth of the pork industry, particularly in Quebec.

The industry consists of many small firms each operating single plants. However the dominant firm is Canada Packers Inc. who have establishments in virtually all provinces. Other major firms include Gainers Inc. Burns Meat Ltd., J.M. Schneider Inc., and Co-op Fédérée. All the major firms are Canadian owned and operated. Foreign ownership is approximate 5%.

The physical plant includes establishments whose core is over sixty years old and others less than five. The older plants have been constantly upgraded and though some of these multi-storey multi-purpose plants may not be as efficient as new single storey/single purpose plants they have continued to compete. The Canadian plant is not less efficient than the competitive plants throughout the world although, in the slaughter field some highly specialized plants in the U.S.A. have changed production patterns in that country. For comparison, 23 Canadian beef slaughter plants with over 50,000 head output per annum handle 77% of Canadian Cattle slaughter. In the U.S. 149 plants with over 50,000 head output handle 85% of the production. Canada has only one plant handling 200,000 head where in the U.S.A. there are four or five handling over 500,000. In hog slaughter 95% of both countries' kill is in plants handling over 100,000 head per year. Here again Canada's largest plant handles less than one quarter of its U.S. counterpart.

Employment

Total employment in the 1980 census of industry is 35,912, of whom 26,610 are shown as "production" workers. The average production wage (1980) was \$17,229.

The industry is largely unionized with the United Food and Commercial Workers representing the workers in the major firms.

Employment in the industry is relatively stable throughout the year as livestock marketings are less seasonal than in the past. There is some upsurge in sausage processing during the summer season and some increased smoked meat activity at the major holiday periods.

Labor relations are generally good with strikes or lockouts being uncommon.

Relationships - Agricultural Producers

The industry is of paramount importance as it is the essential link between the primary livestock production sector and the wholesale/retail food distribution system. Close to 80% of the inputs to the industry are from the livestock sector of Agriculture. The importance to this sector is seen in 1978 and 1979 when farm income from livestock was \$4,048 million and \$4,805 million respectively. In both cases, it was 34% of total farm income.

The importance of the industry to the agricultural community, as measured by farm income, varies from New Brunswick's 20% to Alberta's 48%, derived from sales of cattle, calves, sheep and hogs.

Relationship- Consumer

Although the industry serves the ultimate consumer indirectly, depending on the retail distribution system, it has a high consumer profile due to the importance of meat products in the diet and the consumers' market basket. These products move into consumption on a regular basis, and are therefore under constant consumer scrutiny. Demand shifts from one product to another as consumer purchases respond to changing supply and comparative price levels.

There are a very few processing plants which are producer owned and fewer owned by the retail trade. The industry operates between the producer and consumer (retailer) with little integration.

Productivity

Using Real Domestic Product as an indicator the industry has generally shown a growth rate higher than that of the total Food & Beverage Processing Sector, but has consistently lagged behind Manufacturing Industries in total. The industry's performance is governed to a large extent by livestock cycles. It processes all the livestock available and, to a significant degree, its activity is locked into livestock production.

Wages paid in the Slaughtering and Meat Processing Sector have been consistently higher than those in either the Total Food & Beverage Sector, or Total Manufacturing.

Meat packing hourly wage rates in the U.S. have also been consistently higher than "All Food" and "All Manufacturing" levels. While rates in the meat packing industry for the U.S. were higher than Canadian rates until 1975 there is evidence that the reverse has been true since then (assuming dollar parity). In a measure this has occurred because the "old line" packers in the U.S.A. have been displaced in the slaughtering business by new specialized firms who have negotiated labor contracts at levels considerably below those of the "old line" firms. This has not occurred in Canada.

Using wages related to value added as a measure of productivity shows that the Meat Industry performance is consistently lower than Total Food and Beverage and Total Manufacturing but it has shown some improvement over the years. Meat Processing is basically a high volume/low margin industry with rapid turnover of stocks and full use of labor. Increased productivity per manhour will be developed with increased mechanization of slaughtering and fresh meat operations for which no significant changes are currently anticipated.

Technology and Innovation: Research and development is carried out on a limited scale by many firms, several of the larger ones employing technical and scientific staffs. No detailed breakdown is available for the total industry. Industrial technology developed in Canada has been adopted internationally, but the technological field has been dominated by U.S. and European firms. New technology is developed throughout the industry on a world wide basis and is available to the Canadian industry through agents or subsidiaries of international firms dealing in technology and equipment.

Technological developments in the last two decades have improved plant design and reduced production costs. While some improvements can only be incorporated in new plants, the Canadian industry has quickly adopted those which can be incorporated into existing facilities.

General thrust of current technology is towards reducing costs, improving product, automating processes and maximizing utilization of available material.

Computerization of many aspects of production control, product formulation, both from lowest end cost and high nutrition standards, and of shipping and distribution operations has been carried out by most of the major meat packers.

- 7 -

Profits and Investment: Historically profit as a percentage of income is very low, (1.1 - 1.4%) but the industry has had a reasonably good profit record with which to attract investment (10-13% on equity).

A study of other financial ratios for the mid-70's shows that the meat industry generally has a better performance than total industry in the areas of long term debt and current assets to current liabilities.

Relatively high rates of profit after taxes to equity have encouraged several new entrants into the industry and also take-overs of smaller firms by larger ones or by food industry conglomerates. Given the very low return per sales dollar, tight managerial control and full volume are needed to maintain viability.

In recent years changing hog production patterns lead to plant closure and consolidation in the west and expansion or new plants in Quebec. Current high interest rates have created problems and lead to bankruptcy of some firms with a high debt ratio and/or inadequate management.

National Sectoral Policy

There is no formal government policy related to the meat industry. In most regions there is adequate or surplus processing capacity for the livestock available. Some regions may be deficient in livestock numbers to supply the total regional meat needs, but livestock production (particularly beef) has grown in regions which had an economic advantage (usually large areas of rangeland). The department supports development of economic advantage and does not support regional programs intended to shift livestock production, and therefore meat packing, to those areas where production may require subsidy to be competitive.

There are also adequate or surplus processing facilities on a national basis so the department does not encourage new construction unless it is a replacement of deteriorated inefficient facilities.

However, policies adopted by Agriculture Canada, as they affect meat inspection and sanitation requirements, labelling, stabilization payments, feed freight assistance, animal health; by Health and Welfare; and by Transport Canada all impinge on the industry. The effects of changes in, for example, the "Crow Rate" and the implementation of the Meat Import Act, impinge on the industry. In consequence it is vital that such policies, which originate centrally and have varying effects on the several regions, be monitored centrally and efforts made to modify them, before inception, to have the most beneficial, or least detrimental, effects on the total industry.

While the industry currently relates well to regional livestock supply and consumer demand, any efforts to increase production capacity in one region may seriously disadvantage other regions.

Medium Term Outlook

There is not expected to be any marked increase in livestock supplies within the next five years and whatever increase there may be will be within the capacity of the present plants.

Cattle production and its cycles are closely tied to the practices and patterns of the U.S.A. The two markets are in reality one so that Canadian supplies and prices are lockstep with the trends in the U.S.A. Cattle production has not been profitable in much of the last six years so no signals are being sent to producers to increase herds and ultimately production. Seventy percent of Canadian and American cattle production is from young grain fed animals providing the quality of beef which we have come to expect at the retail counter. By the nature of our geography it is also the cheapest to produce. The other 30 percent is largely cull cows, bulls, and "poor doers" from both the beef and dairy herds and is largely used in manufacturing (hamburger and sausage type products). For this latter product both Canada and the U.S.A. are deficient and import from other areas of the world (largely Oceania) where geography leads to the production of lean beef suitable for manufacture. *at real costs much lower than in Canada*

For all of our pride and satisfaction in High Quality beef, export markets are small and our competition in them is from the U.S.A. which was instrumental in establishing the "H.Q. Standards". Major inroads into these limited markets would not add materially to Canadian output demand.

In the world markets for beef, which demand the leaner beef, Canada does not have the geographical capacity to compete with the major suppliers in the southern hemisphere or with subsidized E.E.C. output. Export markets therefore are not seen as a potential on which to expand the cattle and beef production. Presently the U.S.A. is the largest and expected to remain the largest export outlet although within the trade it is regarded almost as a "domestic" market.

Hog and pork production have benefited during the last ten years from a strong Japanese demand. Canada has been a major supplier for the past ten years and is expected to remain so but only modest growth is expected. The U.S.A. is the other major market but, as with beef, the U.S.A. is regarded almost as "domestic" and trade is two-way. Although Canada is presently a net exporter, in the mid-70's it was a net importer from the U.S.A. Other world markets for pork are limited to local short supply situations with limited continuing trade. As pork production does not require the land base or the biological time sequence of beef production most pork consuming nations are able to supply their own needs.

- 10 -

Reference to beef and pork above has been largely commodity oriented but there is a processing industry producing smoked, cured, canned, and similar products which enter world trade. These include canned corned beef, luncheon meats and canned hams as the leaders, with other canned meats, patés, and specialty sausage and smoked meat products having smaller movement. Canada participates in this in a small way and no major expansion is foreseen.

SECTORAL OVERVIEW
DAIRY PROCESSING INDUSTRY
SIC 1040

PROFILE

Industry Structure

The dairy industry is comprised of establishments primarily engaged in processing raw milk and cream. The important products of this industry are pasteurized fluid milk and cream, natural and processed cheese, creamery butter, condensed and evaporated milk, milk powder, ice cream, frozen desserts such as sherbert and yogurt.

Industry Structure

Dairy plants in Canada are of two principal types:

- i) Fluid milk plants produce milk for use by consumers. The consumer product is little changed from the raw milk received from producers. It has been pasteurized and homogenized, and the fat content of the various kinds of milk has been brought into conformity with government standards. Marketing and pricing are under the jurisdiction of the provinces and are controlled by provincial milk agencies.
- ii) Industrial milk plants manufacture products such as butter, cheese, milk powder and evaporated milk. Prices these plants pay for manufacturing milk is controlled by the federal government under the National Dairy Support Program. The government, through the Canadian Dairy Commission, establishes a target support price for industrial milk and, as well, indirectly controls the price of manufactured dairy products through their offer-to-purchase program for butter and skim milk powder. The support program has been a major stimulus to the rationalization of the industrial milk sector, which has in recent years constructed large central plants characterized by advanced technology and optimum scale.

Regional Distribution

Dairy processing plants are located in all ten provinces. The fluid milk plants are located in or near the urban centres to provide fresh fluid milk and dairy products. These plants obtain the raw milk from producers in the surrounding rural area. The distribution of industry employment and fluid milk sales, correspond to regional population figures. Fluid milk is primarily marketed on a provincial basis and there is very little interprovincial trade in fresh fluid products.

- 2 -

Industrial dairy plants are located in all provinces except Newfoundland. These plants are primarily located in the rural milk producing areas of each province and manufacture all milk and cream that is not utilized by the fluid milk trade. The majority of the industrial milk plants are located in the provinces of Quebec and Ontario and the number of plants per province and employment corresponds closely to provincial milk production figures. The distribution of dairy products is generally on a regional or provincial basis except for cheese and evaporated milk which are marketed on a national basis by the larger companies.

Number of Firms and Regional Distribution

There are 456 dairy establishments in Canada employing over 26,000 people. Small plants employing less than 20 account for 6% of industry shipments, medium size plants employing 20-100 people account for 37% and multi-purpose plants with sometimes over 1000 employees account for 57% of industry shipments. Although dairy facilities are located in all ten provinces, 75% of milk production and processing occurs in the provinces of Ontario and Quebec.

Regional Distribution of Plants Shipment and Employment 1980

<u>Province</u>	<u>No. of Establishments</u>	<u>Value of Shipments</u> \$'000	<u>No of Employees</u>
Newfoundland	10	-	-
P.E.I.	15	51,005	353
Nova Scotia	15	126,624	1,233
New Brunswick	11	63,945	648
Quebec	125	1,673,869	8,198
Ontario	167	1,484,237	8,741
Manitoba	33	144,167	1,098
Saskatchewan	15	-	-
Alberta	38	305,811	2,146
British Columbia	27	329,875	2,390
Canada	456	4,309,194	26,057

- 3 -

Regional Dairy Industry Structure

	<u>Popu- lation</u>	<u>Milk Production</u>	<u>Estab- lishments</u> Per Cent	<u>Employ- ment</u>	<u>Ship- ments</u>
P.E.I.	0.5	1.2	3.0	1.2	0.9
Nova Scotia	3.6	2.1	3.3	4.7	2.9
New Brunswick	3.0	1.4	3.7	3.3	1.6
Quebec	27.5	39.5	25.3	32.3	39.1
Ontario	36.8	35.1	38.4	32.3	35.1
Manitoba	4.5	4.1	7.9	4.3	3.2
Saskatchewan	4.0	3.0	3.1	4.7	3.1
Alberta	7.6	7.6	9.6	7.7	6.7
B.C.	<u>10.7</u>	<u>6.0</u>	<u>5.7</u>	<u>8.5</u>	<u>7.4</u>
Canada	100.0	100.0	100.0	100.0	100.0

Source: Stats Can 32-209, 23-201 and 91-201

Plant Size

Production plant facilities range from small specialized establishments employing less than 19 people, and medium size plants with 99 or less employees to large multi-purpose plants that have over 1,000 employees.

The small establishments, which account for 45% of the dairy plants, only represent 6% of total industry shipments. The medium size establishments represent 42% of the dairy plants and 37% of total industry shipments. The large plants only represent 13% of the establishment but account for 57% of industry shipments.

Establishments and Shipments by Employment Size Group - 1980

<u>Establishment Size</u>	<u>Estab- lishments</u>	<u>% of Estab- lishment</u>	<u>Shipments \$ Millions</u>	<u>% of Shipments</u>
Under 20 Employees	209	44.9	182	5.7
50 - 99	194	41.6	1,121	36.8
Over 100	63	13.5	1,754	57.5

Source: Stats Can 32-209

Employment

In 1980 total employment in the industry was 26,057 or 15 per cent below employment in 1967 which amounted to 31,312. The following table shows that this reduction occurred in the sales and administrative areas where the total decreased by 5,679. This primarily reflects the elimination of home delivery of fluid milk during this period. - In contrast, production employment actually increased by 406 in spite of industry rationalization into large central plants. This increase in production employees is due to the significant increase in the production of specialty cheeses and yogurt. The production of these products are relatively labour intensive as the majority of this production is carried out in small and medium sized plants.

Employment in the Dairy Industry

	<u>1967</u>	<u>1980</u>
Production	13,720	14,126
Sales and Administration	<u>17,610</u>	<u>11,931</u>
TOTAL	31,312	26,057

Source: Stats Can 32-209

Corporate Structure

Ownership

About 50 per cent of the dairy industry in Canada is owned by Cooperatives, 35 per cent by corporations and 15 per cent by private firms. In all provinces, except Ontario and New Brunswick, the majority of the industry is operated by cooperatives. This is predominately the case with industrial milk manufacturing plants. However, the fluid milk, specialty cheese and yogurt industries are primarily operated by corporations and private firms.

The degree of foreign ownership is difficult to determine. While foreign ownership has a minority interest in the total dairy industry, it is an important factor in introducing new technology, new products and promoting increased consumption of dairy products.

Dairy Product Production

Major dairy products produced in 1981 were:

Milk Powder	141 091 Tonnes
Butter	113 348 Tonnes
Ice Cream	153 487 Tonnes
Cheddar Cheese	98 543 Tonnes
Varietal Cheese	75 541 Tonnes
Evaporated & Condensed Milk	208 313 Tonnes

Fluid Milk 2,201,142,000 Litres

International Trade

The Canadian trade in dairy products generally provides a favourable balance. The only exception since 1967 occurred in 1974 and 1975 when due to increased imports of cheese and depressed export markets for skim milk powder imports exceeded exports.

Summary of Trade - Dairy Products (\$ Million)

	<u>Imports</u>	<u>Exports</u>	<u>Trade Balance</u>
1967	18.5	31.0	12.5
1968	17.3	30.5	13.2
1973	63.6	88.1	24.5
1974	75.3	65.0	-10.3
1975	56.0	36.3	-19.7
1976	54.3	60.3	6.0
1977	61.1	91.8	30.7
1978	75.5	92.3	16.8
1979	76.5	121.6	45.1
1980	80.8	159.2	78.4
1981	87.7	209.3	212.6

National Dairy Policies

Both the federal and provincial governments involvement in the dairy industry is monumental. Milk and dairy products must comply with government regulations and/or grade standards from the time milk is produced on the farm until the milk or dairy product is sold to consumers.

In addition, the price paid to milk producers by dairy processor is set by provincial milk commissions or marketing boards. The federal government through the National Dairy Program sets a target price for milk and by implication indirectly controls the price that industrial milk plants pay producers for industrial milk. Through an "Offer to Purchase" program, the Canadian Dairy Commission which administers the federal dairy program, establishes support

price levels for butter and skim milk powder which in turn leads to floor prices for other dairy products. The support prices for butter and skim milk powder also effectively establishes the market price that processors pay milk producers for manufacturing milk.

Similarly, the Canadian Dairy Commission through their "Offer to Purchase Plan", purchase all surplus butter and skim milk powder. This sets the commercial market price for these products. Since both the target price of industrial milk and the support price of butter and skim milk powder are established unilaterally through the dairy support program the industrial milk processors operating margins are effectively set and controlled.

The provincial governments as well as the federal Department of Health and Welfare have set quality standards for raw milk sold off farms as well as the bacterial standards for fluid milk and industrial milk products. The provincial governments in conjunction with the regulatory staff of the Department of Agriculture inspect dairy plants to ensure they comply with the sanitary and regulatory standards of both the provincial and federal governments.

The federal government has established grade standards for manufactured dairy products such as butter, cheddar cheese and skim milk powder. These products are generally traded at the wholesale level on the basis of their grade and hence are treated as commodities which entail low profit margins. In the case of butter, it is also sold by grade standard at the retail level.

The export price of dairy products are also established by the federal government through the Canadian Dairy Commission. The domestic prices of dairy products are considerably above world market prices. The CDC applies a levy on all industrial milk. This generates funds from which they provide export subsidies on dairy product exports.

The volume of industrial milk production in Canada is controlled by the federal government through the Canadian Milk Supply Management Committee. The national market share quota is allocated to provinces according to their traditional production volume of industrial milk. The provincial dairy commissions or marketing boards allocate the provincial market share quotas to milk producers.

Federal government activity in the non-regulatory sphere, has consisted primarily of modest assistance to the industry extended through the programs of the Department of Regional Economic Expansion and Industry, Trade and Commerce. Up to the present, the industry has adapted to changing market conditions through the purchase of smaller plants and rationalizing production in large central plants. Except in the cases where DREE assistance has been applicable, this rationalization has taken place without government intervention or financial assistance.

- 7 -

Distribution of Market-Sharing
Quota in Canada by Provinces
for the 1981/82 Dairy Year

August 1, 1981 to July 31, 1982

<u>Province</u>	<u>Authorized</u> <u>M.S.Q.</u> (Million kilograms/Butterfat)	<u>Percent</u> <u>of</u> <u>Total</u>
P.E.I.	3.334)	
Nova Scotia	2.223)	4.5
New Brunswick	2.255)	
Quebec	84.374	48.1
Ontario	55.111	31.4
Manitoba	6.656)	
Saskatchewan	4.438)	16.0
Alberta	11.451)	
British Columbia	5.447)	
Canada	175.289	100.0

Medium Term Outlook

The world export market for dairy products is currently depressed due to the massive build up of stocks of skim milk powder and butter. The situation will prevail for the next 3 to 5 years. As of May 1, 1982 stocks of skim milk powder in 19 countries amounted to 1,021,000 tonnes compared to 677,000 tonnes at the same time in 1981.

The surplus of skim milk powder in the United States has leaped to 527,000 tonnes as of August 1, 1982, compared to 350,000 tonnes last year. The surplus in the European Economic Community stands at 550,000 tonnes compared to 350,000 tonnes last year.

Similarly butter stocks are building in both the U.S.A. and E.C.C. with surplus stock amounting to 210,000 tonnes and 300,000 tonnes respectively as of June 30, 1982.

The average annual growth rate of the domestic dairy market should be about 1.5 per cent per year for the 1979 to 1988 period. Fluid milk consumption is increasing at 3% per year while butter consumption is decreasing by 4% per annum and cheese consumption is increasing at a rate of 6% per year.

Exports of dairy products in milk equivalent volumes will remain fairly constant over this period. However, the product mix of exports will change considerably. Skim milk powder exports will decline whereas whole milk powder, evaporated milk and cheese exports will increase by about 5% per year. This is due to the change in the export product mix to higher dollar value products.

The imports of dairy products over the 1979 to 1988 period will remain constant. Cheese is the major dairy product imported and imports are limited by a global quota of 45 million pounds. Most dairy products are on the Import Control List of the Export and Import Permits Act in support of the Canadian Dairy Support Program. Import permits are not being generally issued for imports of dairy products.

Total employment in the dairy manufacturing and processing industries are estimated to grow by about 1% per year.

Butter Consumption

The consumption of butter continues to decline and has fallen from 7.28 kilograms per capita in 1968 to 4.45 kilograms in 1981. The decline in butter consumption is reflected in a reduction in Canadian requirements for industrial milk and implies a reduction in the size of the industrial milk manufacturing sector.

Butter Blends

Butter blends are currently manufactured in Nova Scotia and Saskatchewan. Provincial legislation prohibits the sale of these products in other provinces. Dairy Farmers of Canada are opposing the introduction of these products in other provinces. On balance, the National Dairy Council of Canada is favourable to the introduction of butter blends. The NDC was formed 60 years ago for the purpose of prohibiting the sale of margarine in Canada. They did not win this battle and do not want to be faced with the same results regarding dairy blends and cheese analogs. Their members want to be in a position to manufacture these products.

Cheese Analogs

Cheese analogs are marketed in the United States and in 1981 the estimated production was about 120 million pounds or 3 per cent of the total U.S. cheese production. At the present time provincial legislation prohibits the sale of these products in Canada.

Government Regulations and Grade Standards

While government regulations and grade standards are instrumental in developing high quality products, they are regarded as excessive and it is suggested that retard the introduction of new and modified dairy products. For example, cheddar cheese and butter are traded at the wholesale level according to grade. At retail, cheese is sold by brand and does not require a grade whereas butter is graded. Similarly yogurt is not sold by grade but by brand name. In the case of cheese and yogurt there has been numerous introductions of new and modified products which have stimulated consumer interest. This has resulted in significant increases in per capita consumption. In the case of butter, there has been relatively no new or modified butters marketed in Canada. Butter is sold as a commodity and consumption has significantly declined.

Returns Adjustment Formula

Since 1975, the target returns level of industrial milk has been calculated and established as indicated by the Returns Adjustment Formula. This has resulted in an average of two price increase of dairy products per year. As the price of dairy products increase the consumption generally declines. The dairy industry may be responsible for decreasing output and employment.

(a) Butterfat Exchange Program

The Canadian Dairy Commission is exchanging butterfat on the international market to reduce losses from exporting skim milk powder. Export markets are being developed for evaporated milk and whole milk powder. The world market for these products is expanding at prices which increase the value of the skim milk solids and reduce the storage, interest and transportation costs. Since the program is one of exchanging butterfat, it has no effect on the domestic market for butter. Butterfat at Canadian prices is too expensive to export. The only way to nullify losses on exports of Canadian butterfat in products such as whole milk powder and evaporated milk is to replace the equivalent amount with imports at the world price. The increased value of skim milk solids exported in this manner, reduces the loss on exports of skim milk powder and provides improved profit margins to industrial milk manufacturers.

(b) MTN Terms of Access for Canadian Cheese Exports

Improved terms of access for Canadian cheese exported to the European Economic Community (EEC) and the United States were obtained by Multilateral Trade Negotiations. An arrangement for the export of aged Canadian cheddar cheese was negotiated with the EEC. Under this arrangement, Canada has a special quota of 2,750 metric tonnes (6.1 million pounds) for aged cheddar cheese with a

- 10 -

lower minimum import price requirement and a reduced fixed levy. The arrangement also provides, for access of aged cheddar in retail pack sizes. The arrangement provides that adjustments will be made in minimum prices if necessary to ensure the quota can be filled. Canadian cheese exported to the United States is subject to quotas totalling 2,044 metric tonnes (4.5 million pounds). However, soft cured cheeses in retail packs and sheep or goats' milk cheese is not subject to quotas and can be exported freely to the U.S.

The quotas allocated to Canada are divided by type of cheese as follows:

	<u>Metric Tonnes</u>
Aged Canadian Cheddar	833
Swiss Type Cheese	70
Other Variety Cheeses	<u>1,141</u>
TOTAL	2,044

Interprovincial Issues

The supply of industrial milk available to manufacturing dairy plants has remained relatively constant for the past five years. Due to the decline in butter consumption and increase in cheese utilization the volume of milk utilized by the butter and cheese sectors has shifted considerably. In those provinces that have a majority of large multi-purpose manufacturing dairy plants this has not created major problems. However, in a province such as Ontario where the plants are primarily single purpose plants producing either cheese or butter, significant problems have developed. Faced with a static and declining milk supply the industrial milk industry has rationalized their production through the acquisition of smaller plants and construction of large centralized plants to obtain economies of scale. In most areas this type of rationalization has been completed. In the future, with a no growth or declining milk supply situation, increased manufacturing costs cannot be absorbed in part by the industry and will have to be passed directly to consumers. With declining production, the operating margins allowed the industrial milk plants will have to be reviewed to take into consideration the cost of their increasing overhead.

- 11 -

Policy Implications

The dairy industry is in reasonable health but very vulnerable to sudden shifts in direction. The Federal Dairy Policy, through limitation on milk supply imposed by the supply management system and the provincial allotments of market sharing quota, has forced a continued rationalization of the production and processing sectors of the industry in every region of Canada. As a result of the limits imposed by supply-management only the most efficient, processors are remaining in the dairy industry.

SECTORAL OVERVIEW
FISH PRODUCTS INDUSTRY
SIC 1020

1) Profiles

a) Industry in Perspective

The Canadian fishery consists of Atlantic, Pacific and inland sectors which are distinct from one another in size and organization as well as in species caught, technology employed, products sold and markets served. Together, in 1981, they accounted for a landed value of well over \$700 million. The sector comprises some 600 companies with factory shipments of over \$1.80 billion. Of this, 85%, or \$1.5 billion, was exported, making Canada the world's leading exporter of fishery products for the third consecutive year (although we ranked only about fifteenth in terms of fish caught). Of this export volume, 52% went to the United States, 20% to the European Community, 10% to Japan and the balance to a number of smaller or less developed markets in other countries.

There is a sizeable foreign (mainly Japanese) debt capital investment in the Pacific coast fishery, but equity ownership and control is Canadian on both coasts and, in several instances, Canadian companies have established foreign sales and even processing subsidiaries. Smaller companies sometimes exhibit lack of sophistication in international trading, but this lack of experience is rapidly being corrected.

(b) Industry Characteristics, including competitive Strengths and Weaknesses

Atlantic Fishery

The Resource

The volume and value of East Coast landings exceeded 1.1 million tonnes in 1981 (over \$520 million) up from 1.05 million tonnes (\$470.8 million) in 1980. Since the introduction of the 200 mile limit in January, 1977 resource recovery has been general and reasonably rapid. Major species in Atlantic Canada are groundfish (Newfoundland in particular), herring (New Brunswick, Nova Scotia) and shellfish. Groundfish catches should in 1982 reach 825,000 tonnes (of which the cod catch may reach 500,000 tonnes).

- 2 -

Harvesting

The catch is harvested by some 48,500 fishermen (1981 figures, split evenly between full and part-time fishermen). There has been a significant increase particularly in Newfoundland, where the number of fishermen doubled between 1976 and 1979. This was a major area of anticipated resource expansion. There are now about 28,500 fishermen in Newfoundland (45% full-time). The Maritime Provinces and Quebec, on the other hand have experienced a loss in fishermen of 2,069, dropping from 25,434 to 23,365 by 1979.

A gross distortion has developed between the fishermen's income aspirations and market-return realities. In part, this wage demand/market return distortion exists because of over-optimistic reaction to the declaration of Canada's 200-mile fishing zone and its expected benefits. A second cause has been the flood of new entries, caused by easy entry to the inshore fishery in Newfoundland.

Processing

There are approximately 700 fish processing plants in Atlantic Canada, distributed widely along the coasts of the five provinces. These plants vary in size, diversity of operations and type of proprietorship. The size of plants varies from large vertically integrated plants that are trawler dependent and are capable of producing in excess of 2500 t of product annually, to medium sized plants with production capacity of 1000 t to 2500 t, to small plants of less than 1000 t capacity. Plant operations vary with combinations of fresh/frozen, salted, canned or cured products being processed. The proprietorship ranges from multi-national public and private companies to independent fishermen packers to a crown corporation. Employment in the processing sector in Atlantic Canada is about 47,000.

The majority of plants are located in Newfoundland and Nova Scotia with about a third distributed among Quebec, P.E.I. and New Brunswick (see tables I and II). The majority of operations involve fresh/frozen and salted products mostly from groundfish species. Fresh/frozen production accounts for approximately 60% of the total, while salted production makes up 10-12%. In the mid-1960's salted production was approximately 25% of the total while

- 3 -

in earlier years (pre-1950) it represented the majority of production.

Despite the large number of processing operations, concentration of production is very high. Industrial concentration varies from area to area but the sector has been dominated by four large multi-plant vertically integrated companies. Fishery Products, the Lake Group, National Sea Products and Nickersons' (the latter two are linked corporately) own 93% of the offshore trawler fleet and together produce over 60% of the total Atlantic Coast groundfish production. The concentration is even more pronounced in frozen groundfish production where the top 4 firms produce 75% of the total product.

With regard to the National Sea-Nickerson links, on June 6, 1982 National Sea Products Ltd. and H.B. Nickerson's merged all sales and marketing activities, to be handled by National Sea. As well, National Sea and Nickerson's have combined their processing, sales and marketing organizations in the U.S.A. into National Sea products (U.S.) Corp. Ltd. Tampa, Florida. National Sea will lease two Nickerson plants and a cold storage facility in the U.S.A. for a two-year period and will have an option to acquire the shares of the Nickerson companies in the U.S.A.

Fish processing plants can be divided in two categories: year-round and seasonal. The year-round plants are dominated by the four vertically integrated companies. During the 1960's and early 1970's this sector operated almost separately from seasonal plants. However, since extension of jurisdiction in 1977, the large companies, particularly Nickerson's, have invested extensively in building and acquiring seasonal plants. The year-round plants are characterized by (i) capacity in excess of 2500 t, (ii) low variability in throughput, (iii) specialization of production (emphasis on frozen groundfish).

The seasonal plants tend to be operated by small independent companies. Production is varied with frozen and salted groundfish, and cured pelagics (mostly herring) accounting for the majority of production. In recent years frozen and canned shellfish has become a major product for some companies. Production techniques in seasonal plants

- 4 -

are relatively labour intensive. Consequently, fixed capital costs tend to be low and the crucial element in operations is working capital for the purchase of raw material, payment of wages and the financing of inventory. Typically, these plants exhibited a fairly high rate of entry and exit. This is attributable to the modest capital requirements for certain operations such as filleting (feeder plants) and curing. This is evidenced by the large number of new plants that was established in conjunction with the large scale development of the herring fishery in the mid 1960's.

The operating period for seasonal plants varies depending on area, resource availability and product diversification. Plants producing a single product such as canned or frozen shellfish or cured herring are greatly dependent on resource availability, and as a consequence may operate for only a few months. The ability of a plant to diversify into other products such as groundfish may extend its operating season to 6 or 8 months.

The primary function of the processing industry is to convert fish into a form suited to the needs of the consumer and to do so in a way that will protect the quality of the product until it is consumed.

Problems in remaining economically viable while fulfilling this role are caused by over-capacity, obsolete or inappropriate facilities, seasonal operations, poor quality fish and low productivity.

Growth in the processing industry outstripped the increase in landings, especially in Newfoundland, where fishing plants, geared to an inshore fishery, and government grants intended to increase employment, encouraged the construction of plants for which there was not an adequate supply of fish.

At the same time, as indicated earlier, there was a large increase in the number of people licensed to catch fish. In Newfoundland, virtually all of the new licences were for the inshore fishery so that, even though overall capacity was excessive, at the peak of the inshore season the plants will have a short term glut of fish. The need for haste, under these circumstances, dictates that much of this fish must be processed into low value blocks.

- 5 -

All of these problems relate ultimately to cost, relative to what the consumer is willing to pay for the perceived value and relative to what our competitors incur to produce equivalent product. Excess capacity and seasonality add to unit overhead and outmoded facilities and equipment affect labour productivity. Raw material costs must also be brought under control and, more importantly, brought into responsive relationship with market prices. The present annual contract system provides no effective means for the processor to adjust his cost in response to market fluctuations.

Continuity of raw material supply is another important factor in running an economical operation, both from the viewpoint of keeping the plant running and retaining trained or skilled workers, but also from the viewpoint of ensuring continuity of output without which long term sales contracts, and advertising and merchandising programs, cannot be supported.

Beside continuity of supply, consistency of quality, particularly with regard to the inshore fishery is another serious problem which the processor must face but over which he has not had adequate control. The quality of fish begins to deteriorate the moment it is caught but careful handling and storage and prompt processing can minimize the deterioration. Frequently, that care has not been given and quality has already been compromised before the processor gets the fish due to rough handling, inadequate refrigeration, unsanitary storage or excessive holding time. This situation is frequently due to a surge in landings that is beyond the plant's processing capacity, or the need to truck fish long distances to a plant which does have capacity.

Productivity in fish processing plants does not on the whole fare well in comparison to other sectors. Seasonality in many fish plants makes it difficult to maintain good efficiency of both workers and management. While more capital intensive technology could improve productivity, high interest rates make such adoption difficult.

Marketing

80% of fish production in Canada is exported, in particular to the United States (\$815 million), the

- 6 -

E.E.C. (\$308 million) and Japan (\$172 million). In 1981, over \$360 million of fish products were imported into Canada over half from the United States. Canada's main exports by species are cod (162,900 tonnes) and herring (117,100 tonnes). (See Table III for detail).

Each of these major markets is also a major producer so that Canada has only a 15% share of the American market, less than 1% of the Japanese market and about 2% of the market in Europe. These are not positions of strength as far as market control and price setting are concerned and to survive, let alone grow, in these markets, Canadian suppliers have to face competitors who in many cases have a higher or, at least, more consistent quality and are able to use more efficient, modern technology.

Despite Canada's preeminent position as a fish exporter, the individual Canadian companies are small. Even the largest fish processors are small by food industry standards and cannot afford to underwrite the kind of promotional campaigns which their European and Scandinavian competitors are able to support. Various cost factors, together with limited product diversification (which inhibits spreading generic promotion costs more widely) are reasons for dollar limits on Canadian processed fish promotions.

As referred to above, there is a quality problem. For years Canadian fishermen and fish processors had a careless or indifferent attitude toward quality and, although there have been improvements, Canadian product is still at a perceived disadvantage (not always deserved) relative to competition.

The other problem is with product mix. The Canadian processing industry is equipped both in terms of facilities and technology to manufacture products which they had sold historically. Very few have the flexibility or technological skill to do differently and are restricted to the stockpiling of product for which there is limited demand, while being unable to exploit the opportunities of the new markets they need.

Inland Fishery:

Canada's total exports of freshwater fish in 1981 amounted to approximately 30,000 MT, worth about \$78 million.

- 7 -

The U.S. takes about 75-80% of the exported fish - mostly whitefish, pickerel and smelt. Freshwater fish also goes to Japan (smelt); France (pike); Finland and Poland (whitefish); Switzerland (perch).

There are approximately 35 processors in this region. One of which, the Freshwater Fish Marketing Corporation in Winnipeg - a crown corporation set up about 13 years ago - handles most of the fish from Canada's central region. This corporation is the exclusive marketing agency for the products of Manitoba, Saskatchewan, Alberta, the Northwest Territories and N.W. Ontario.

Some 8,000 fishermen and plant workers harvested and processed in 1980 about 50,000 MT of freshwater fish with a landed value of \$47 million. The principal inland fishery is in Ontario, accounting for 52% of production, followed by Manitoba, Saskatchewan and Alberta with 36%. There are also inland fisheries in New Brunswick and Quebec (8%) and the Northwest Territories and Yukon (4%).

Pacific Coast

The Resource:

Annual landings by Canadian fishermen on the west coast range from 130,000 to 160,000 metric tonnes per year with a landed value of \$218 million in 1981. This is only 10% of the total tonnage caught by Canadian fishermen but it accounts for 25% of the value.

This is a result of the high unit value of the principal west coast species, salmon (5 species) and herring (principally for roe extraction). In 1981 salmon accounted for 66% and herring for 19% of the landed value of the west coast fishery. The balance was made up of relatively small quantities of various flatfish, groundfish, and shell-fish.

Harvesting:

To conduct this harvest there are about 20,000 licensed commercial fishermen and an estimated 320,000 sports fishermen, the latter fishing mainly for salmon.

- 8 -

Processing:

Canning (of salmon) and extraction of herring roe are the two most important processing operations in the west coast fishery but there are also a full range of freezing, smoking, curing, filleting and other operations employing a total of 5,000 plant workers. In 1981 canned salmon production was valued at \$237 million and herring roe production at \$69 million of a total west coast fisheries production of \$519 million.

90% of the Pacific coast processing capability is held by 15 companies, the largest of which are British Columbia Packers and Prince Rupert Fishermen's Co-operative.

Because of the seasonal nature of the harvest, plant capacity, although barely adequate during peak periods, may be idle for much of the year. Plants designed to handle a variety of species can extend their operating season somewhat but long periods of under utilization of capacity are still characteristic of most operations.

Marketing

Like its east coast counterpart the west coast industry is heavily export oriented (over 70% of its production) the major markets being Japan, U.K. and the United States.

In the Japanese market the principal product in terms of value is herring roe. Canada is the principal supplier of this product. During the past few years the price has fluctuated wildly because of speculation by some Japanese trading companies but this appears to have been stabilized.

The canned salmon export market (50% of which is in the United Kingdom) was severely strained this year by a quality problem which originated in U.S. packed product but affected the entire market. Marketing programs are now in place to overcome the effects of the problem but it will probably be a year before the market is fully recovered.

The remaining products of the industry, although relatively small in volume, are important because

- 9 -

most of the product innovation and new market development originate among them.

- c) The Atlantic fishing industry is experiencing particular economic difficulties, due in part to high interest rates applied to high capital debts (incurred as a result of industry expansion after 1977) and to escalating bank loans to finance inventories and losses, as well as to increased operating and raw fish costs, and sluggish market prices. In order to offset major short-term disruption in the industry, a number of Atlantic fish companies have been given federal loan insurance assistance and/or contributions; several other cases are under discussion. Short term debt as a result of 1980-81 economic conditions has become so significant in a number of cases that their viability is in question without major financial restructuring. The inland and west coast fisheries have also been affected adversely by the recession, though to a lesser degree.

ii) National Sectoral Policies

Jurisdiction over the fisheries is split between the federal and provincial governments, with the federal government responsible for resource management, harvesting and inter-provincial and international trade. Provinces have jurisdiction over the establishment of processing plants. Policies of the provinces can result and have resulted in situations where plants have been built or capacity expanded against federal advice.

Because of the multitude of fisheries problems, a Task Force on Atlantic Fisheries was established by the Prime Minister in January, 1982 to recommend policies for the long-term viability of the Atlantic fishing industry.

The policy framework for the Task Force has had to take into account all of the social and business oriented policies which have been in place in Atlantic Canada. Those who demand a purely "economic" fishery would not take account of the social need to preserve jobs in rural communities. The policy framework has also included the results of the 1977 extension of jurisdiction, financial over-extension in particular.

Options have been presented to deal with international issues, resource and harvesting problems, the processing sector, the northern fisheries, quality, the port market,

- 10 -

marketing and herring seiners. This Department will, among other things, be looking for an emphasis less on increases in plant capacity than on more efficient and productive use of assets already in place. The Task Force Report is expected to be made public in November, 1982.

On the west coast, the primary sector is affected by a conflicting set of policies governing native rights, recreational fishing needs, resource management constraints and, competition for use of the fishing and spawning areas by non-fishing interests such as shipping, lumbering and urban development. The pressure to satisfy social needs is not as strong as on the Atlantic coast but there are still problems matching the level of harvesting effort to the magnitude of the resource.

The secondary or processing sector is not plagued by excess or inappropriate capacity to the same extent as on the east coast but it is faced with a much more tightly integrated trade union organization which has forced wages which make it difficult to be price competitive and profitable at the same time. The Pearse Commission on the Pacific Fisheries has recently made public its final report, which includes recommendations relating to a major "buy-back" program of vessels, licensing systems etc. but does not deal in detail with processing issues. The federal government has not yet commented on this report.

iii) Medium Term Outlook: Opportunities and Constraints

Atlantic Fishery

The medium term outlook for the Atlantic fish processing sector will depend to a considerable degree on the nature of policy changes which result from the recommendations of the Task Force on Atlantic Fisheries. Aside from policy initiation there will be a considerable increase in the supply of Atlantic coast species. Groundfish landings, cod in particular, may increase to 315,000 tonnes by 1987. Estimates are for increases in demand on world markets for Canadian groundfish over the next five years of only 185,000 tonnes. The difference of 130,000 could be absorbed, given implementation of new policies such as the Task Force has suggested in a public "Issues and Options" paper, July 1982. Increased promotion, quality upgrading are among such suggested policies. The new policies must be established to cope with this

- 11 -

estimated surplus and to sell it without disruption to the market.

By 1988, given the current crisis in the East coast fishing industry and the need for some rationalization of processing capacity, there will be fewer plants and fewer companies. There will also be fewer purely seasonal operations. There should be greater product diversification (more development of species such as mackerel, more exports of fresh fish and high-value fillets), greater plant productivity and efficiency, some increased government participation.

Traditional markets should continue to provide new opportunities for export growth, such as further development of the fresh fish and frozen fillet markets in the United States. New market potential in Africa and the Middle East should be tapped (e.g. stockfish for Nigeria).

There are particular problems related to the social policy orientation of the inshore/offshore split in the Newfoundland fishery. If ways can be found to supply seasonal plants year-round, and so smooth out many of the peaks and troughs in the Newfoundland fishery, then this will allow many small fishing communities to remain viable. Processors could then spread out their costs over a longer period and employment would be more stable. General improvements in plant efficiency would help much.

Nova Scotia has a healthier industry due in part to the offshore orientation of the groundfish fishery and to the other high value species (eg.-scallops) which are fished.

In addition, Nova Scotia is well located geographically to be able to supply fresh fish to the United States market. The Nickerson/National Sea sales merger, and any further rationalization which may take place, will do much to place the Nova Scotia fishery on a firm footing for the next few years.

Both Prince Edward Island and New Brunswick should have good medium-term prospects for viable fisheries, particularly in lobster and crab and other shellfish. Herring processing problems in 1982, brought on by federal over-the-side sale policies must be overcome in New Brunswick and Nova Scotia - some shifting in fishing from herring to mackerel could help here, if federal

- 12 -

policies permit. As well, development of a U.S. fresh fish market for New Brunswick fish could be considered.

Quebec is characterized, like Newfoundland, by a significant number of small fishing communities, where there are few or no alternate sources of employment. The largest Quebec fishing company, Quebec United Fisherman, has been experiencing considerable difficulty due to depressed market conditions and high financial losses. In order to keep the company operating and employment maintained while the company is undergoing major restructuring, the federal government recently provided a contribution of \$1.25 million. It is hoped that this assistance will allow the company time to restructure so that its future viability is not in question.

Pacific Fishery

The current economic recession will take its toll of companies in the fish processing industry as in any other and during the next five years there will be a further reduction in the number of salmon canneries from the present 16 canneries to 10 to 12. Total production, however, will increase due to improved facilities and an extended canning season.

Prudent resource management will restrict herring roe supplies to about current levels and prices will rise slightly faster than the inflation rate. Exchange rate fluctuations between the value of the Canadian dollar and Japanese yen will be an important factor but no unusual difficulties are for foreseen for the industry.

Potential growth areas which would benefit from government assistance are the fresh groundfish market in the United States, smoked salmon markets in Europe, Asia and Australia and the development of added value groundfish, herring and salmon products.

iv) Interprovincial Issues:

Interprovincial rivalry exists particularly between Newfoundland and Nova Scotia, with the former concerned especially with protecting inshore fishermen living in small communities, the latter with maintaining an economically viable fishery. Federal fish allocation policies, limits on use of factory freezer technology are seen by Nova Scotia as supporting a less than efficient Newfoundland inshore fishery. Any Newfoundland policies which promote the increase in processing capacity (or

- 13 -

resist the closure of non-viable operations) will be opposed by Nova Scotia, particularly when these policies result in more fish resources being allocated to Newfoundland vessels to service these plants.

Prince Edward Island representatives have raised strong concerns about the closure of a large plant at Georgetown, and may continue pressing for its reopening.

British Columbia is the only province involved in the Pacific coast fishery and there is no reasons for inter-provincial or federal-provincial conflict in objectives. There is, however, a feeling in British Columbia that that province is being neglected in the matter of federal assistance to the fishery or that federal policies are drafted without adequate consideration for British Columbia concerns and circumstances.

v) Policy Implications

Atlantic Fishery

The recommendations of the Task Force on Atlantic Fisheries should, if accepted, provide the basis for the development of national fisheries policies over the next few years. From the perspective of regional policies for the processing sector, there should be a move away from the expansionist policies of recent years, with greater emphasis on more efficient operation of existing plant capacity. Emphasis should be on improvements in training of workers and management, improved financial systems, better productivity etc.

Rationalization and restructuring of the East Coast processing sector has already been identified as a priority, if financial viability is to be ensured. Because of the great shortage in necessary equity, the federal government may increasingly be called upon to provide financial assistance (grants, equity, loan insurance guarantees...). A longer term objective should be to consider allowing some foreign investment in the sector, as a means of providing badly needed equity capital; joint ventures could also provide possibilities for further marketing opportunities for Canada.

Processing at sea would allow Canada to tap certain quality markets in Western Europe and Japan as well as to facilitate growth in the North American market.

- 14 -

Pacific Fishery

The west coast industry is seen presently as operating in a policy vacuum or, even worse, in an environment of inadequate, inappropriate and incompatible policies. This must either be refuted or corrected. Certainly the B.C. industry sees itself as being treated according to policies that are inequitable in terms of what is done for the Atlantic industry and inappropriate in terms of the realities of the B.C.

The Pearce Commission has covered the policy issues impinging on the primary sector but has not gone to any significant depth in discussing issues of importance to the processing sector. Such policies should be defined preferably after federal-provincial-industry consultation. Policies to be established should cover the locus of responsibility for plant location, technology, product mix, quality, marketing, responsibility to the primary sector and to general community needs and concerns. In particular, the role of industry and the two levels of government should be clearly defined in a way that the needs of long term planning will be respected and the handling of short term emergencies will be responsive and not reactive.

TABLE I

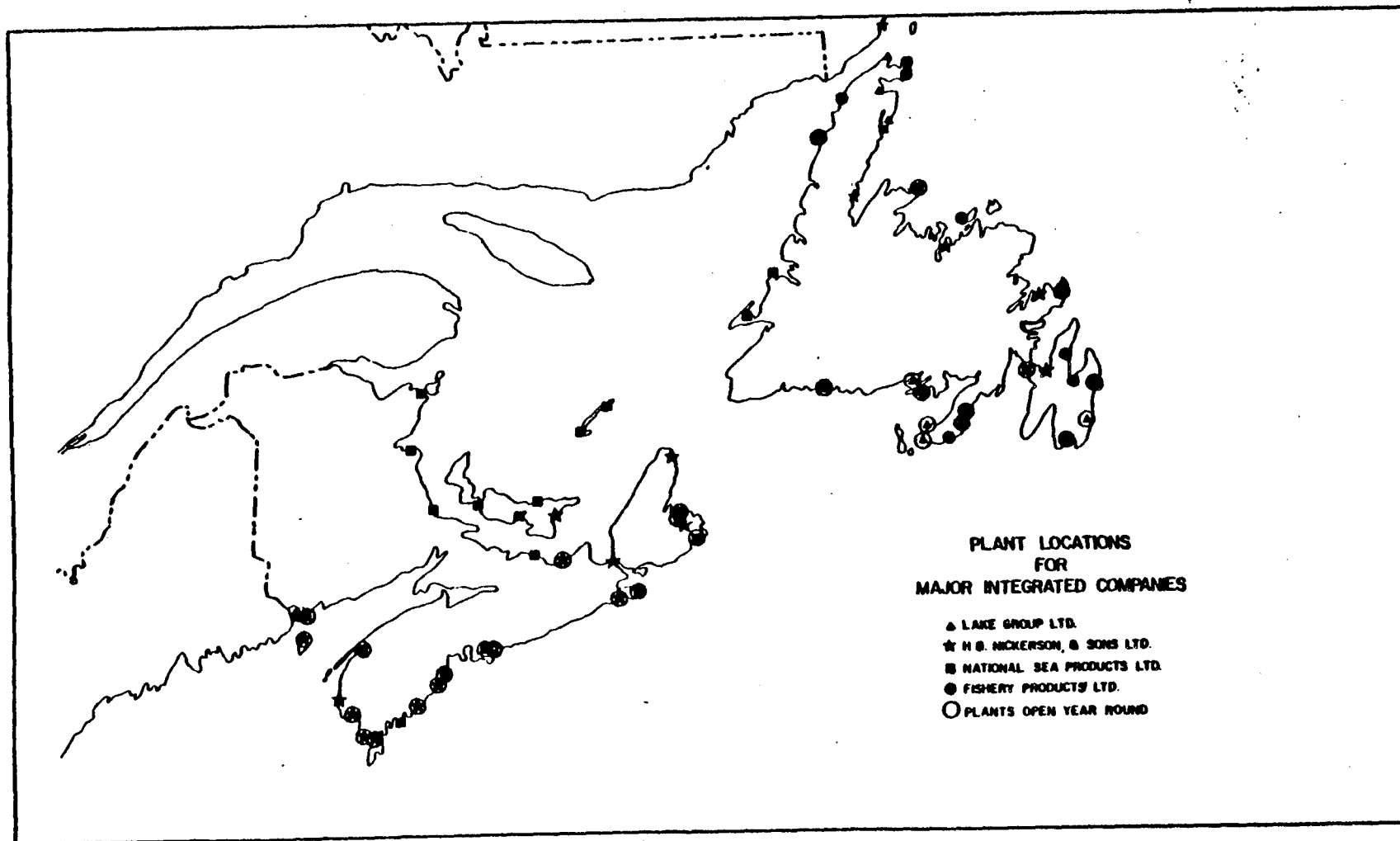
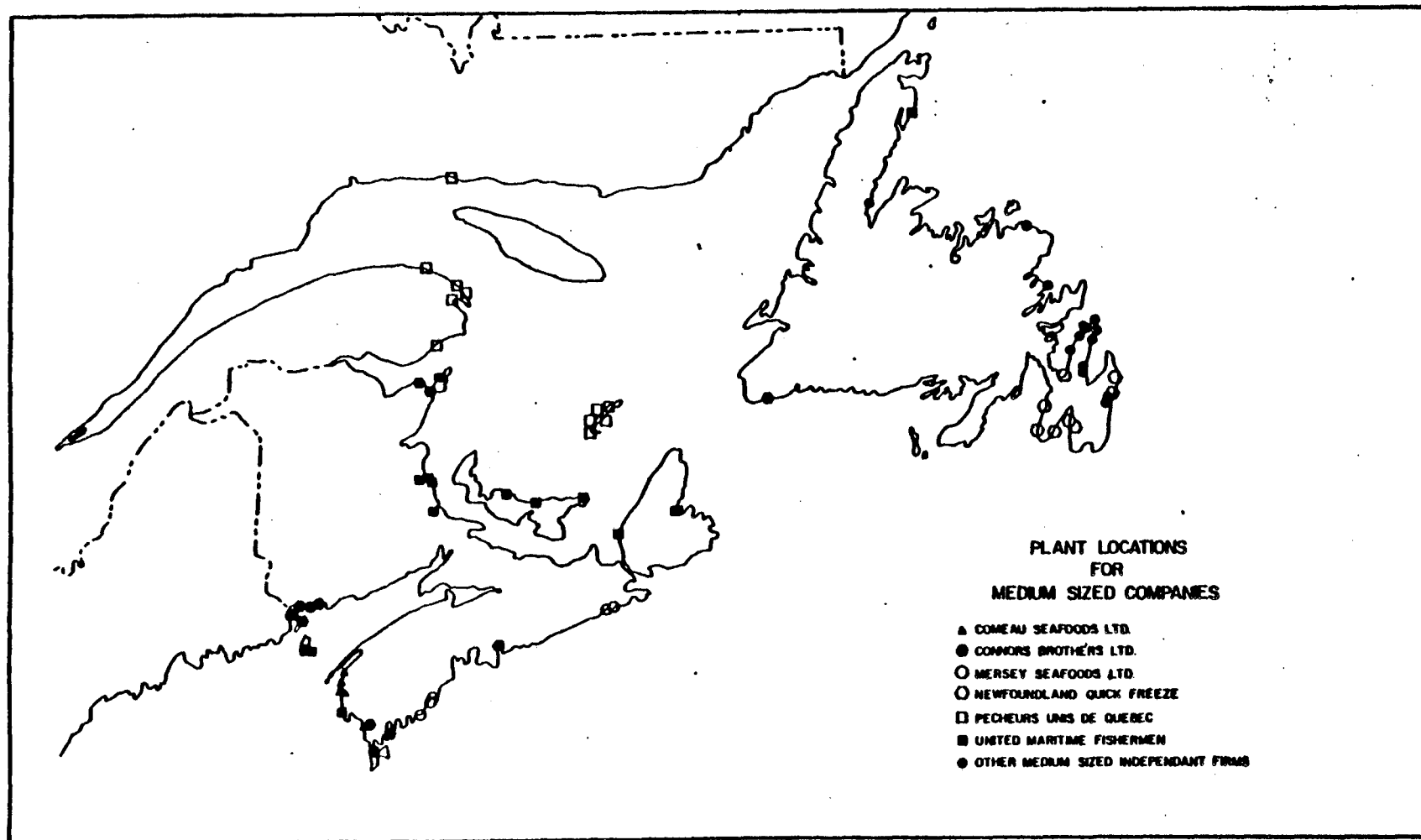


TABLE II



- 17 -

Table III

Canadian Exports by Species 1981
Quantities (Q) in '000 Tonnes, Product Weight

Species
Groundfish

Cod	162.9
Flatfish	27.9
Haddock	27.0
Ocean Perch	24.6
Pollock	18.12
Turbot	10.5
Halibut	5.4
Hade (salted)	4.2
Catfish	1.2
Other (salted)	1.3
	<u>283.12</u>

Pelagic

Herring	117.1
Salmon	51.6
Other	14.3
	<u>183.0</u>

Freshwater

Smelt	9.3
Whitefish	5.5
Pike	2.6
Pickrel	2.5
Perch	2.2
Other	8.3
	<u>30.4</u>

Shellfish

Lobster	16.8
Crab	12.1
Scallops	10.2
Squid	7.9
Shrimp	6.8
Other	10.3
	<u>64.1</u>

Source: Fisheries and Oceans.

THE SERVICE ECONOMY

INTRODUCTION

The importance of the service sector to Canada's economic well-being has increased dramatically over the past 30 years, particularly with respect to employment. While total employment in the Canadian economy doubled from 5 million to 10 million between 1950 and 1979, service sector employment more than tripled, from 2.2 to 7 million. Of the 2.7 million new jobs created over the past decade, over 2.2 million, or 80%, originated in the service sector. Significantly, this sector now accounts for two thirds of the Canadian GDP.

Such statistics leave little doubt that with more than half the work force now employed in producing intangibles, Canada has become a service rather than agricultural or manufacturing economy. However, in spite of this shift, the nature, functioning and role of services in the national and international economies continues to be misunderstood.

DEFINING THE SERVICE SECTOR

One factor which has frustrated reasoned discourse with respect to services is the problem of definition. Services encompass such an enormous and heterogeneous grouping of activities that overall agreement as to what is to be included is often difficult to achieve.

Two common approaches are generally followed in defining services. The first emphasizes the intangible nature of the service product. The second, and perhaps more common approach, is based on a straightforward listing of those sectors which are to be considered as services.

The task force on Trade in Services, while acknowledging the problem of definition, described services as "intangible economic commodities produced for sale or distribution through the market mechanism or through established programs or institutions". Their report recognized, however, that while in most cases tangible goods can be distinguished from intangible services without difficulty, borderline cases and transactions involving a mix of services and goods are not uncommon. Two such examples are the construction and publishing industries. Although generally considered as services, both produce tangible goods.

.../2

- 2 -

A further problem is that clear lines of separation between services and manufacturing are often non-existent as both incorporate the output of the other in their production processes. Manufacturers, for example, often meet their own requirements with respect to services such as design, accounting, marketing, software development, engineering, financial management, data processing, and personnel management.

a) Departmental Mandate

Some services are clearly a part of DRIE's new mandate. Examples include the distributive trades (wholesale and retail), transportation services, consulting services, construction services, and a variety of other sectors where government policy affects the business environment of the country. At the same time, there exists a large number of sectors, specifically those orientated to personal rather than business services, where the department will probably never get involved, at least not in the near future.

CHARACTERISTICS

b) Measurement

Unlike goods, which are transferable, a service can be exchanged only when it is embodied in a good. Being intangible, services cannot be transported or stored, but must be provided to the user as they are produced, (e.g., rental service, equipment repair), or provided over a period (e.g., storage service, education, consulting service). Services are end products with many different measurement units such as students educated, goods sold, tonnage moved, visitors accommodated, advice given, conversations transmitted, etc. These are ultimately translated into values. However, while the costs of providing the service are usually definable, and collectable as statistics, the benefits are often indefinable in monetary terms and difficult to measure statistically.

c) Relationship of Goods and Services

Goods and services are often interwoven with certain goods required for the production of most services, and vice versa. This relationship can be categorized as follows:

.../3

- 3 -

Category One: Services, embodied in goods (e.g., motion picture films, sound recordings, books and computer tapes).

Category Two: Services complementary to trade in goods (e.g., shipping, including port services, handling and storage, other transportation (air, rail, road, inland waterways) including handling, warehousing and storage at loading and delivery stations; insurance and reinsurance of cargo for fire, theft and similar risks; banking related to trade in goods such as the financing of imports and exports; brokerage, such as transport and insurance brokers; and advertising for products traded internationally).

Category Three: Services that substitute for trade in goods - (e.g., franchising, chartering, leasing, and repairs and maintenance).

Category Four: Services that are traded without a relationship with goods (e.g., banking other than related to trade in goods; life and other types of insurance not related to trade in goods; professional services such as accounting, architectural, engineering, legal and medical; real estate; telecommunication, data processing and information services; and travel.

Category Five: Service sectors such as the distributive trades act as the market channel for goods, and all goods rely on transportation services for movement from one geographic location to another. Given the spatial diversity of the country, both functions are crucial to economic adjustment policies and economic development.

The linkages between goods and services are growing, not weakening. It is becoming increasingly difficult to see services or goods, in either domestic or international markets, without at least a component of the other sector involved. Financial services are required for economic development to stimulate existing industrial structures or establish new ones; consumer goods flow through the distributive trades marketing channels; transportation services are required to move goods and in general a wide variety of business services are required. Thus regional adjustment and trade become a matter of both goods producing and service producing sectors working in unison.

.../4

- 4 -

Role of Service in the Economy

Services have been growing as a proportion of the overall economy of the developed countries, despite changes that have seen some service sectors grow dramatically and others decline. Table I illustrates this trend in "Summit" countries (different statistical bases render inter-country comparisons problematic).

TABLE I

Services in Summit Countries (GNP and Employment)

Country:	Canada		FRG		France		Italy		Japan		U.K.		U.S.A.	
Year:	'60	'78	'60	'78	'60	'78	'60	'78	'60	'78	'60	'78	'60	'78
<u>Services' Proportion of GNP:</u>	60%	65%	41%	49%	52%	58%	46%	51%	42%	55%	53%	62%	58%	63%
<u>Services' Employment Share:</u>	52%	64%	38%	48%	39%	51%	29%	39%	37%	48%	48%	55%	57%	65%

Source: World Development Report 1980

A recent study entitled "The Growth of the Service Sector in the Canadian Economy", for the Ministry of State for Science and Technology, suggests that, at least in the case of Canada, when price changes are taken into account, services have been a larger and more stable proportion of the economy than previously thought, changing noticeably only in the 1970's. This report, if confirmed, would appear to imply that the importance of services in the economy has been underestimated.

.../5

- 5 -

In the service sector, real output measures are considered to be reliable for only about 25% of the output of the sector. If proper output measures were available, the service sector's share of the total output of the economy could well increase. Thus, the figures presented in Table II may be conservative.

TABLE II

Services as a Proportion of Canadian Gross Domestic Products

	<u>1950</u>	<u>1960</u>	<u>1970</u>	<u>1979</u>
Nominal	48.3	57.2	62.1	62.5
Real	61.6	62.2	62.7	65.0

Source: Internal MSST Study - based on Statistics Canada data.

e) Sectoral Shifts

There is considerable variation in growth rates within the service sector. Transportation and communication services have become increasingly important. Public administration has exhibited less growth. Domestic services are in decline. Trade (wholesale and retail), finance, insurance, and community, business and personal services have grown similarly to the service economy overall.

The critical role that communications and information services play in the modern economy must be underlined. For many other services, as also for many goods industries, the degree to which rapidly changing information technology is assimilated will be a key to the success or failure of those sectors.

f) Corporate Structure

The size and diversity of the service economy allow all types of structures and corporate configurations to exist. Certain sub-sectors are primarily within the public domain, for example education and health systems. From the perspective of the federal government, it is noteworthy that a growing number of businesses in these sectors are privately held. Consultants are involved in both fields and an increasing number of firms deliver health and educational packages to both domestic and international markets.

Other components of the service sector are monopolies or duopolies, such as telecommunications systems. Some sub-sectors,

.../6

- 6 -

although privately held, are highly regulated, as for example, some of the cultural sub-sectors such as radio and television. Overall however, the service sector has a private enterprise characteristic. Businesses range from very large enterprises such as the Hudson's Bay Company or Canadian Pacific down to a host of one owner operated firms.

The service economy is approximately 85% Canadian owned and in only rare instances are sub-sectors primarily controlled by foreign entities. Even so, there are some very large corporate entities which are primarily foreign controlled.

Major problems can occur as a result of the procurement practices of foreign owned and controlled multi-national enterprises (MNE) in other sectors. MNEs are in a position to allocate expenditures to operations in one country or another depending on the corporation's financial and economic interest. Many MNEs provide services from head offices or affiliates to Canadian branches, or purchase services for an affiliate from firms with which it is familiar in the home country. Thus, the Canadian market for services is distorted and smaller than it might otherwise be. One area of uncertainty relates to how multi-national enterprises contract and/or provide services to their Canadian corporation. For example, it has been estimated by industry spokesmen that up to one-half billion dollars in consulting fees per annum are lost because MNE's in Canada look elsewhere for this service.

g) Employment

Employment in services has been growing faster than in the economy as a whole. While total employment in the Canadian economy doubled from 5 million in 1950 to 10.4 million in 1979, service sector employment has more than tripled. Of 2.2 million new jobs created in Canada over the past decade, 2.2 million, over 80%, originated in the service sector. However, CEIC does not expect such a high growth rate of services-related employment to be maintained in the 1980's. (See "Labour Market Development in the 1980's". CEIC)

As noted, market differences among service sector components exist. Transportation, storage and communication have not increased their share of total Canadian employment (1946 - 8.9%, 1979 - 8.7%). The distributive trades' component increased 3 or 4 percentage points to 17.4% in 1979. Finance, insurance and real estate doubled their share (1946 - 2.7%, 1979 - 5.3%) and the catch-all groups, community recreation, business and personal services, and public administration, more than doubled (1946 - 16.7%, 1979 - 35.1%). In contrast, goods producing industries, including agriculture, fell from 58.9% of total jobs in 1946 to 33.4% in 1979.

.../7

- 7 -

h) Productivity

Productivity measurement for the service sectors is extremely tenuous, mainly due to conceptual and measurement problems. Nevertheless, it is a generally accepted view that productivity in the service sector has been growing, but at a rate below that in the goods producing sectors.

Several reasons have been advanced for this comparatively slower rate of growth. Foremost are the statistical problems associated with measurement of output. Others include the lower rates of increase in capital employed per person, less improvement in the quality of labour employed, a slower rate of technological innovation and a general inability to capture economies of scale as a result of the preponderance of small-sized enterprises. Moreover, the public sector portion of the service economy is technically allocated a zero growth in productivity, which would have a depressing effect on figures for service productivity.

There are also important differences within the sector: capital utilization is extremely high in transportation services; consulting has one of the highest education levels; technological innovation is rapid in telecommunications and computer services; and some of the companies in the services sector are among the largest in Canada. Consequently, the level of productivity varies substantially among the different sectors of the service economy. While output per man-hour in the transportation, communication and other utilities sector increased by 280% between 1950 and 1979, it increased by only 27% in the commercial, business and personal services sector over the same period. For in the finance, insurance and real estate group, productivity had reached a sectoral plateau by 1950. Thereafter, increases were only 17%. New technologies currently being introduced should lead to substantial productivity growth rates in this area.

INTERNATIONAL TRADE

Despite the domestic importance of the service sector, Canada's trade is concentrated in goods. In 1981 Canada exported \$84.1 billion worth of goods but only \$14.9 billion worth of services (\$11.7 billion of "tradeable" services). In the same year, imports amounted to \$77.5 billion worth of goods and \$29.7 billion on service accounts including \$14.8 billion in "tradeable" services. (Table III)

.../8

- 8 -

TABLE III

CANADIAN BALANCE OF INTERNATIONAL PAYMENTS CURRENT ACCOUNT

(millions of dollars)

<u>Item</u>	1981		
	<u>Receipts</u>	<u>Payments</u>	<u>Balance</u>
Merchandise	84,140	77,504	6,636
Services	14,859	29,673	- 14,814
"Tradeable" Services	(11,700)	(14,800)	-(3,100)
"Non-Tradeable" Services	(3,100)	(14,800)	-(11,700)
Transfer	3,058	1,456	1,602
Total	102,057	108,633	- 6,576

In 1977 Canada exported 28 percent of its goods production, almost four times greater than our export proportion in services (7.5%). Import penetration in Canada's market for goods was more than 29 percent in 1979, also more than four times greater than the import penetration for services (6.8%).

"Tradeable" services are defined as everything in the services account except interest, dividend and miscellaneous investment income payments. The "tradeable" services deficit - travel, freight and shipping, government transactions, business and personal services and other service transactions - increased in absolute terms over this same period (from \$0.8 billion to \$3.1 billion), but remained at close to 1 percent of GNP. If "tradeable" services did not include government services, the "tradeable" services deficit in 1981 would be almost half a billion dollars less.

.../9

- 9 -

The tradeable services account falls into three general categories: Travel, Freight and Shipping, and Other Services. Other Services, which includes business and personal services and government transactions, also includes the remainder of service transactions. In 1981 this category generated receipts of \$3.8 billion, or 32.4 percent of all "tradeable" service receipts. Some of the more significant sources of receipts, in order of importance, were consulting and other professional services, management and administrative services, payments for research and product development, royalties, copyrights, trademarks and film rentals, and advertising and sales promotion. In terms of payments it was by far the largest category at \$5.9 billion, or 32.4 percent of all "tradeable" service receipts.

Some of the more significant sources of receipts, in order of importance, were consulting and other professional services, management and administrative services, payments for research and product development, royalties, copyrights, trademarks and film rentals, and advertising and sales promotion. In terms of payments it was by far the largest category at \$5.9 billion, or 39.9 percent of total "tradeable" service receipts. The main payment categories in order of significance were royalties, copyrights, trademarks and film rentals, management and administrative services, special tooling and automotive charges, and research and product development. This account was in deficit by \$2.1 billion in 1981 and therefore accounted for 67.7 percent of the "tradeable" services deficit.

The Other Services account has had a deficit in every year of the past 3 decades. This deficit has been growing in absolute terms. Excluding government transactions it has, however, remained constant over the last ten years as a share of GNP at about 0.5 percent.

The trade orientation of the total service sector in 1977 was about one quarter as high as in the goods sector. This represents a significant change from 1961 when the trade orientation of the service sector was roughly one half as high as in the goods sector. This change occurred because the trade orientation of services remained fairly constant over the 1961-77 period while that of goods increased significantly.

The import penetration of the goods sector increased from 20.9 percent in 1961 to 29.1 percent in 1977 while the corresponding figures for services are 6.1 percent and 6.8 percent. Similarly, the export orientation of the goods sector increased from 17.5 percent in 1961 to 27.3 percent in 1977 (a significant factor of the increase in the goods trade during this period was the Canada-U.S. auto pact). The export orientation of services, however, was 7.5 percent in both years, through the export orientation of the service sector went as high as 9.3 percent in the late 1960's.

.../10

- 10 -

Import penetration of services is by far the highest in business services, at 15.9 percent in 1977. This was the case over the full 1961-77 period. At the other extreme, personal and other miscellaneous services are shown to be virtually unaffected by import penetration. This, however, may be somewhat misleading; expenditures by Canadians travelling abroad on this type of service, which includes such items as accommodation and food services, are not treated as an import of this category. Rather, such expenditures are counted as imports under the travel account (unallocated imports and exports in the Input/Output accounts). Nevertheless, when Canadians choose to buy foreign services rather than domestic alternatives, domestic activity in this category is affected.

Communication services is the only category to show increasing import penetration, moving from 0.5 percent in 1961 to 1.6 percent in 1977. On the other hand, both transportation and storage, and other finance, insurance and real estate indicated quite stable import shares of the domestic market over the 1961-77 period, with both at 2.7 percent in 1977.

Transportation and storage has the highest export orientation, though it has been declining over time, moving from 10.2 percent in 1961 to 8.3 percent in 1977. Even so, export orientation remains substantially higher than import penetration in this category. In contrast, the personal and other miscellaneous services category shows the lowest export orientation. However, as already noted, these numbers are somewhat biased due to the exclusion of exports related to expenditure by foreigners travelling in Canada, similar to the problem discussed above on the import side.

The export orientation of business services has varied over time, ranging between 4.7 percent (in 1961 and 1973) and 7.2 percent (in 1965). Over the most recent period for which data are available, 1973-1977, the export orientation of this sector increased from 4.7 percent to 6.2 percent. However, the export orientation of this sector remains well below its corresponding import penetration figures.

Communication services is the only sector to show a significant upward trend in export orientation, moving from 0.9 percent in 1962 to 1.2 percent in 1977, thus paralleling in direction but not fully matching the upward trend in import penetration in this sector. The other finance, insurance and real estate grouping's export orientation remained fairly stable over this period, at less than one percent.

.../11

- 11 -

IMPACT OF THE CURRENT ECONOMIC RECESSION

Business enterprises in the service economy have traditionally had a relatively high turnover in the first five years of business. Under the current economic environment, there is a growing number of bankruptcies in the sector and, contrary to past experience, a declining number of new businesses are being established. This is the result of a decrease in consumer expenditures, a reluctance to grant loans to businesses which have few capital assets (assets being inventory or human), and a tightening of demand from other sectors which utilize services. As an example, consumers buy less from retailers, retailers buy less from manufacturers and utilize less business services such as accountants, advertising agencies, etc.

The above trend is evident in job creation. While no aggregate figures exist, there seems to have been an absolute decline in the number of jobs available in the service economy. This leads to fewer job opportunities for first time job seekers, second income earners, and low skilled employees in general.

Productivity improvements, however small and wherever possible, are actively encouraged. This has meant that internal to at least some sectors of the service economy, investment levels have been maintained but they are not as "lumpy" as they used to be. Large capitalization projects such as the construction of new shopping centres or the introduction of new expensive technologies has been curtailed somewhat.

POLICIES IMPACTING ON THE SERVICE SECTORS

a) Domestic

There are a number of sectoral policies currently in place at both the federal and provincial level. Quite apart from the large public and quasi-public services domain, many service sectors are highly regulated, either by the Government (banking, insurance, etc.) or by the industry itself (e.g., the professions). These regulations have been put in place in whole or in part for sound and continuing reasons of public order. Some of these regulations have had a protectionist effect either incidentally or, on occasion, by design. Also regulations written for goods industries can affect services and vice versa.

.../12

- 12 -

A number of national horizontal policy issues impact upon the services economy. With the service economy comprising 66% of the GNP, in effect, all national economic policies will have some impact upon the sector. Government procurement of services has seen rapid growth during the 1970's. By 1980, federal purchases of services exceeded those of goods. With an estimated 76 jobs created for every \$1 million spent in service procurement it is seen as a major mechanism for job creation. The GATT Code on Government Procurement covers services only to the extent that they are incidental to the supply of products and cost less than the products themselves. It is foreseen, however, that the 1984 GATT negotiations will include services.

Both the Federal and Provincial Governments have legislation and policies which restrict foreign investment/right of establishment. In the financial sector, legislation relating to banks, loan companies, trust companies and other finance companies reflects the broad government policy of maintaining Canadian control of financial institutions. Legislation in the cultural sector (e.g., the Broadcasting Act) is designed to insure a strong Canadian presence. There is also Federal legislation in a number of other areas such as transportation. Provinces control professional accreditation, e.g., architects, doctors and engineers.

Taxation and fiscal policy obviously impact upon the service economy. One major problem is the shift in the excise tax from manufacturers to wholesalers. Service exporters frequently indicate that the Canadian tax structure is less favourable to Canadians than governments in other OECD countries give to their exporters. The various job creation and training programs of Manpower and Immigration have tremendous impact on the service economy where most of the new jobs created in the country belong to this sector of the economy.

With a million small businesses classified as service firms, the special attention being paid to small businesses by government is particularly crucial.

b) International

Canada has a wide variety of measures to provide financial assistance to exporters of goods and/or services including those offered through the CDC and CIDA. While service exporters are included under some programs, and these exporters expressed general satisfaction with the kinds of program available, it was felt by service industries in general that greater flexibility might be injected into various programs to better meet the need of service exporters.

.../13

- 13 -

The Canadian Import regime and GATT provisions at present cover a certain range of services. Tariffs, for example, have the effect of providing protection to services which are embodied in goods or on goods which are needed to transfer services, e.g., telecommunication equipment. There are numerous bilateral agreements with many countries covering a variety of specific service sectors or issues. These include air agreements, double taxation agreements, cultural agreements, and a number of agreements relating to patents. Several rather more general economic cooperation agreements touch fairly extensively on services.

MEDIUM TERM OUTLOOK: OPPORTUNITIES AND CONSTRAINTS

a) Market Forecast

The service economy fluctuates with national economic conditions, but will probably show less fluctuation than the economy as a whole. Even so, the high growth rates of the past are not foreseen. This decline in economic activity is to be found in all parts of Canada and is consequently not as visible as a plant closing in the manufacturing sector. The assumption has been that service firm disappearance would be compensated for by new business entry or absorption of the market by other similar firms. However, in an increasing number of cases, firm closure or employee lay-offs are not being replaced. By 1985, most services will have grown in real terms by only 3 - 4%. Since services are found throughout the country, the impact of this slow growth will be stronger in regions which do not have a strong manufacturing base. International markets for service exports are predicted to grow at least double that found in the domestic market. There is also an important import substitution factor for service markets; some sectors such as computer services will be showing large and growing trade deficits (\$4 billion by 1990) unless there is strong programs to develop this capacity in Canada.

b) Factor Supply

There will continue to be a surplus of job seekers who could be usefully employed in the service economy. As the sector is largely non-union, wage increases will be kept to low levels, even in early 1982 wage increases averaged well within the 6/5 guidelines.

.../14

- 14 -

c) Technological Developments

Some sectors such as financial institutions will be large users of new technologies. The distributive trades will enter the computer era in order to control inventories. The large swings of inventory buildups and sell-offs will decrease in intensity if large numbers of the distributive trades enter into communication agreements with their suppliers.

REGIONAL EXPANSION OPPORTUNITIES

In some service sectors the locational/spatial characteristics are such that there is no comparative advantage to locating in specific regions. These firms are highly mobile and with proper government planning and incentives, could be induced much more readily than manufacturing to locate in accord with government locational policies.

INTERPROVINCIAL ISSUES

Services, being ubiquitous and tied to local markets for many subsectors, do not on the whole have the same degree of interprovincial rivalries as do other economic sectors. However, in certain subsectors such as computer services, consulting or financial services, all provinces are anxious to participate. Up to now, services have been essentially ignored by provincial governments and their potential as a vehicle for economic and regional development has been largely overlooked.

The Distributive Trades Consultative Committee Report, The Consultative Committee on the Canadian Consulting Engineering Industry Report, and the Trade in Services Report have all shown the magnitude of the opportunities for economic development. Together these documents are stimulating provincial interest. With regard to the development of domestic services policy and trade in services, Ontario, B.C. and Alberta are calling for a formal Federal/Provincial mechanism which would ensure provincial input and requirements.

.../15

- 15 -

POLICY CONSIDERATIONS

A report, prepared by the Task Force on Trade in Services was submitted to government in July 1982. Essentially, its recommendations were as follows:

- Canada should participate in discussions on services and services trade in international forums such as the OECD and GATT. This would include an exploration of general trade services, and a readiness to examine certain sectors for possible treatment in negotiations;
- consideration should be given to a domestic review of the service sector within Canada in terms of an overall approach within Canada to the service sector and services trade, and
- a modest program of public education, on the service economy and its role on both the domestic and international stage, should be initiated within both federal and provincial jurisdictions.

Consistent with these recommendations is the present activity of DRIE in assessing eligibility of the service sectors for assistance under the department's existing programs. Significantly, the Deputy Minister's Committee for International Economic Relations has endorsed the need for the development of a domestic service sector policy.

V. Smith
2-0028

000112

APPENDIX A

Distribution of Real Gross Domestic Product 1971-1981 (1971=100)

	1971	1975	1976	1977	1978	1979	1980	1981
	%	%	%	%	%	%	%	%
ALL INDUSTRIES	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
I. <u>Goods Sector</u>	40.5	38.5	38.6	38.2	37.8	37.8	37.0	36.9
A. <u>Primary Goods</u>	8.0	6.7	6.7	6.7	6.3	6.1	6.2	6.1
B. <u>Secondary Goods</u>	32.5	31.8	31.9	31.5	31.5	31.7	30.8	30.8
Manufacturing	22.9	22.1	22.3	22.1	22.4	22.7	21.9	21.7
Construction	7.0	6.8	6.6	6.3	6.0	5.9	5.7	5.9
Electric power, gas & water utilities	2.6	2.9	3.0	3.1	3.1	3.1	3.2	3.2
II. <u>Service Sector</u>	59.5	61.6	61.5	61.7	62.2	62.3	63.1	63.1
Trade	11.8	13.0	12.9	12.7	12.7	12.7	12.6	12.4
Wholesale	4.9	5.4	5.2	5.1	5.2	5.3	5.3	5.1
Retail	6.8	7.6	7.7	7.5	7.5	7.4	7.3	7.3
Transportation, Storage & Communi- cations	9.5	9.9	9.9	10.1	10.2	10.6	10.8	10.9
Finance, Insurance & Real Estate	11.5	12.0	12.1	12.4	12.6	12.7	13.1	13.1
Community Business & Personal Service Industries	19.3	19.4	19.4	19.5	19.6	19.5	19.7	19.9
Public Adminis- tration & Defence	7.4	7.3	7.2	7.1	7.1	6.8	6.9	6.8

Source: Statistics Canada: 61-213 (1980)
61-005 (June 1980)

APPENDIX B

NUMBER OF ESTABLISHMENTS FOR SERVICE INDUSTRIES AND GOODS PRODUCING SECTORS, 1981

<u>Service Industries Sector</u>		718,500
Trade		230,000
Wholesale Trade	47,000	
Retail Trade	183,000	
Finance, Insurance and Real Estate		44,000
Transportation, Communication & Other Utilities		83,000
Community, Business & Personal Service Industries		130,000
Other		1,500
<u>Goods Industries</u>		174,128
Primary		21,697
Agriculture)		
Forestry)		
Fishing)		
Mining)		
Secondary		152,431
Construction	86,354	
Manufacturing	66,077	

*includes both primary and secondary activities for all establishments

Source: Dun & Bradstreet

APPENDIX C

000115

DISTRIBUTION OF THE EMPLOYED LABOUR FORCE

BY INDUSTRY IN CANADA DURING 1946, 1977 AND 1979-81

	1946	1977	1946-1977		1981		
	Proportion of Total, All Industries	Proportion of Total, All Industries	Average Annual Employment Growth Rate	Proportion of Total, All Industries			
	Number (Thousands of persons)	Number (Thousands of persons)	(Per cent)	Number (Thousands of persons)			
Service Industries	<u>1,937</u>	<u>41.5</u>	<u>6,422</u>	<u>66.6</u>	<u>4.0</u>	<u>7,370</u>	<u>67.4</u>
Trade - Wholesale and Retail	619	13.3	1,679	17.4	3.0	1,875	17.1
Transportation, Storage and Communications	413	8.9	819	8.0	1.8	904	8.3
Finance, Insurance and Real Estate	124	2.7	531	5.0	4.6	592	5.4
Community, Recreation, Business and Personal Services and Public Administration	781	16.7	3,393	35.2	5.2	3,999	36.6
Goods-Producing Industries	<u>2,729</u>	<u>58.9</u>	<u>3,226</u>	<u>33.4</u>	<u>0.6</u>	<u>3,563</u>	<u>32.6</u>
Primary ¹	1,372	29.4	705	7.3	-2.1	798	7.3
Secondary ²	1,357	29.1	2,521	26.1	2.1	2,765	25.3
Manufacturing	1,148	24.6	1,888	19.6		2,120	19.4
All Industries	<u>4,666</u>	<u>100.0</u>	<u>9,648</u>	<u>100.0</u>	<u>2.4</u>	<u>10,933</u>	<u>100.0</u>

Source: Statistics Canada, Labour Force Survey, Catalogue 71-001 (CANSIM 2064)

1 Includes agriculture, forestry, fishing and mining.

2 Construction and manufacturing.

Government
of Canada

Gouvernement
du Canada

MEMORANDUM

NOTE DE SERVICE

TO
A

Mr. M. Taylor
Senior Policy Coordinator
Capital & Industrial Goods

(16/1)

FROM
DE

Chief
Ocean Industries Division
Aerospace & Marine Branch

(51)

SUBJECT
OBJET

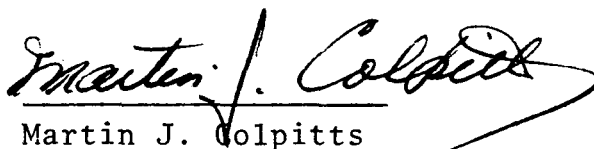
Ocean Industries
National Sectorial Overview

SECURITY - CLASSIFICATION - DE SÉCURITÉ
OUR FILE / NOTRE RÉFÉRENCE 5099-3-26
YOUR FILE / VOTRE RÉFÉRENCE
DATE October 21, 1982

Reference: Memo of September 20, 1982 from Assistant
Deputy Minister, Capital and Industrial
Goods to Director General, Aerospace &
Marine.

As requested, attached is my division's Sectorial
Overview. A more in-depth Review is being undertaken
at this time.

Should you have any further questions please contact
myself or Eric Meek at 995-3201.


Martin J. Colpitts

Attach:

OCEAN INDUSTRIES

NATIONAL SECTORIAL OVERVIEW

Purpose

The Ocean Industries Sectoral Overview is a discussion paper to provide an input into the formulation of Regional Industrial Development Frameworks.

Sector Profile

Ocean Industries consist of those companies which supply equipment or services such as manufactured products, contracting and consulting services to undertake the exploration and exploitation of the resources of the oceans. The present major emphasis is on the exploitation of offshore oil and gas; however, other resources can include fresh water, food, power (wave, tidal or thermal) and minerals. The industry does not include traditional fishing equipment and marine transportation vessels.

During the last decade, the ocean industry in Canada, has grown in size, output and technological capability. Diversified equipment such as offshore oil drill rigs, sub-sea oil production systems, sub-sea surveying systems, manned and remotely controlled submersibles, and survival suits and oceanographic equipment have been developed and are marketed internationally.

In order to describe the types of companies in this sector, they have been categorized into three distinct groupings: core companies whose production and services are significantly allocated to the ocean industry market, secondary companies a portion of whose activities are destined for this market, and tertiary companies which have the capability to produce equipment and supply services for this market once the exploitation of offshore resources commences.

There are approximately 250 companies in Canada whose production and services are either totally or partially devoted to this sector. Sixty of these can be considered as core companies since they depend on this market for the majority of their revenues. These companies offer a wide diversity of products and services uniquely oriented to the oceans. They generally have the following characteristics:

- 2 -

- opportunity oriented;
- sell low volume/high value custom-engineered products or services domestically and internationally;
- employ mainly highly skilled people;
- fledgling or small;
- have a high growth rate;
- considered as high technology;
- provide ocean technology as a new engineering discipline;
- single or small range of products;
- mainly Canadian owned;
- have a high ratio of R&D costs/annual sales and long lead time from product inception to actual sales. This often results in significant financing problems;
- must compete internationally with foreign firms much larger than themselves, yet have achieved significant export sales successes to date (approximately 50% of sector sales are exports - \$500 million in 1981);
- many have world leading technology in a specific technical area or have the ability to develop high technology items as need arises.

The remaining 190 secondary companies have sold or have plans to sell into the ocean industries market, but their principal products are currently directed toward traditional land-based and marine markets. These companies range in size from a few employees right up to large multinational companies with several thousand employees and, in many cases, have simply adapted their traditional products to meet the demands of this new and growing sector.

In addition, there is a group of tertiary companies offering products or services which can be applied to the ocean industries market. Their involvement is only now starting as the Canadian domestic market reaches the late exploration and early production phase. A large number of these companies are located in Atlantic Canada. This group of companies includes metal fabricators, helicopter operators, catering

- 3 -

services, warehouse services, drilling materials suppliers, etc.

Sales volume of the ocean industry was approximately \$1 billion in 1981, of which approximately \$500M was export. This compares with sales of about \$50 million in 1970.

The offshore exploration expenditures were practically nil in the late 1960's and grew to approximately \$1,000M in 1981 and were about equally divided between the East Coast and Northern regions. The Canadian offshore annual expenditures are expected to increase to over \$5 billion by 1990. This assessment is being borne out by past and present forecasts of activities taking place off the East Coast of Canada and in the Arctic regions. The world market for offshore oil and gas equipment exceeded \$8 billion per annum in 1977 and is expected to reach in excess of \$20 billion in 1985.

Total direct employment of the core companies was over 6,000 in 1981 with approximately 25% of these in the professional class. The predominant areas of expertise are engineering, geology, marine biology, oceanography and geophysics. By 1990 it is expected that 20,000 persons will be employed in Canada's offshore and related support activities.

The strengths and weaknesses of the sector are listed below

Strengths:

About a dozen of the core companies, the small consulting firms, have developed world-leading capabilities in the measurement of ice strengths, movements and properties, as well as in ice engineering projects, such as the development of ice platforms for Arctic offshore drilling.

Another group of core companies, manufacturers, has developed world-leading technologies in specific technical areas of the international market, including the manufacture of manned and unmanned submersibles, subsea production and undersea survey systems, ocean instrumentation and pollution control equipment. Canadian service contractors are increasing their activities in foreign waters.

A solid base of equipment and service companies has been developed in Canada as the result of on-land hydrocarbon exploration and production in Western Canada. These firms can readily adapt their products and services to the domestic offshore production market when it occurs.

- 4 -

After-sale service is a crucial factor in the selection of equipment by the oil companies and their contractors; Canadian-based firms are consequently in an advantageous competitive position in the domestic market by virtue of their location.

Weaknesses:

Many of the companies are still small and do not have the financial resources to handle very large projects. They have the customary weakness of a fledgling company even though they are in a high growth industry sector which must compete on the international level.

In general, Canadian industry lacks the experience and reputation to capture major complex engineering, procurement and construct contracts. However, as Canadian offshore activities increase, this situation should improve.

National and Sectorial Policy:

The overall objectives of the sectorial policy are:

- a) to create an environment within which the Canadian Ocean Industry and its associated ocean technology can develop to meet needs arising from the exploitation of Canada's ocean resources;
- b) to make use of this knowledge to take advantage of export opportunities as they arise throughout the world.

The Ocean Industries Consultative Task Force made a number of conclusions and recommendations regarding the Ocean Industry sector (see Executive Summary attached); these recommendations and conclusions along with the industries strengths and weaknesses are used as a basis for the sector policy objectives which follow:

a) Industrial Development:

Promote research and development among the ocean industry sector firms; coordination and focusing of Federal and Provincial programs to support Ocean Industry sector taking into consideration regional disparities and industrial needs

b) Promote Domestic Trade:

Mega Project opportunities are monitored with a view to increasing Canadian participation and benefits. Monitoring the oil and gas industry in order to ensure that Canadians receive an equal opportunity to bid on the equipment and services required for resource development

- 5 -

projects. Dissemination of Canadian suppliers information to Canadian companies is carried out in support of this. This is an inter-regional concept to ensure that opportunities are available to all Canadian companies.

c) Export Market Promotion:

Export opportunities are disseminated to Canadian companies for consideration. Active promotion of exports is undertaken through PEMD support, trade missions, and participation in trade shows. To this end, about 50% of the Ocean Industry sector's sales are exports. As world offshore development increases the export opportunities are expected to increase, and export sales volumes will continue to expand for Canadian companies.

d) Special R & D Promotion

The ocean industry is a high technology sector that requires special support and consideration due to long lead-times required for the development of products and specialty items. This is important since the companies are typically small and under financed, but have highly qualified technical staff that can develop world competitive products. A special R & D assistance program for the Ocean Industry is necessary; consistency should be mentioned throughout the regions.

e) Manpower Training and Development:

The sector will continue to need engineers and highly skilled labour, and technicians and engineers of all trade categories. To this end, support has been given to the development of centres of excellence and to the development of trade organizations such as Canadian Ocean Industries Association and Canadian Diving Contractors Association.

f) New or Modification of Existing Programs:

There is a need for a monitoring procedure to enable the existing assistance programs to be modified or to propose new programs in support of requirements of the Ocean Industries.

Medium Term Outlook

Canada Offshore Oil and Gas

During this decade, oil and gas in commercial quantities will likely be produced from resources located in Canada's offshore

- 6 -

areas. To bring these resources to market the petroleum industry will need to make very large expenditures on capital goods and services. These expenditures should provide attractive opportunities to all facets of the Canadian economy. It has been estimated that \$20 billion of expenditures and 164,000 manyears of work will be created in support of the offshore development between now and 1990. Hence, no doubt, in the time frame from 1982 to 1999 the Ocean Industry sector in Canada will be dominated by offshore exploration and development projects with major developments taking place on the East Coast and in the Arctic regions. Nevertheless, during this time the world offshore market will continue to expand and provide additional opportunities for Canadian industry to export proven technology, goods and services.

The ocean frontiers are conservatively estimated to contain approximately 30% of the total hydrocarbon resources of the world; and it is felt that more than 70% of these offshore oil and gas deposits remain undiscovered.

In addition, a significant market will continue to be present for the oceanographic and scientific community that require instruments and services for various marine projects in support of exploiting or conserving the resources of the seas.

The Canadian offshore potential in the medium term will be discussed by area.

Labrador Shelf:

Currently the drilling program off the Labrador Coast consists of 4 drill ships. Due to the short drilling period, capital equipment has been contracted from foreign sources; however, significant expenditures have been made on goods and services in Canada; in 1981, about \$40 million, or 41% of total expenditures was spent in Canada. The level of and percentage of expenditures in Canada will increase as exploration programs increase.

Grand Banks and Newfoundland Shelf

Exploration activity is expected to increase to an annual program of 14 wells by 1984; annual drilling expenditures are expected to grow from \$124 million in 1982 to peak at about \$500 million by 1987.

Hibernia field development will likely commence in this time frame once the jurisdictional problems are resolved; multi-billion dollar Hibernia field development will be phased in over a time frame of 5-7 years. It is expected that

- 7 -

preliminary engineering will start once jurisdictional problems are resolved. Opportunities will exist for manufacturers of offshore structures, accommodations, processing equipment, drilling equipment and consumables, loading and transportation equipment, supply ships, safety equipment, work clothes etc., and general support services for large offshore projects such as supply boat operating, warehousing, catering, transportation support, infrastructure support, etc.

Other hydro carbon structures are being explored such as Hebron and will require further delineation in the medium term. It is expected that 2 to 3 additional commercial hydro carbon structures may be found in the area near Hibernia. - Preliminary field development may begin by 1988. Three fields like Hibernia including development drilling and completions are expected to cost \$5.7 billion over 8 years (with over \$2 billion by 1988).

Scotian Shelf

The major project that will take place over the medium term is the Venture (Sable Island) gas field development. The Venture field has been declared commercial by Mobil; once the regulatory process is completed; field development will commence. The development is expected to take place over 4 to 5 years with an expenditure of \$263 million; target date for completion is 1987.

Business opportunities will include jacket fabrication, module construction, processing plant equipment, pipeline laying, pipe drilling and gathering system, underwater well heads, supply boats, etc., and services such as diving, environmental monitoring, catering, supply boat operation, helicopter support etc.

In addition to Venture field development, exploratory drilling will increase. For example, PetroCanada is drilling on Banquereau structure which shows promise. Nevertheless, there is expected to be a significant increase of exploratory and delineation drilling on the Scotian Shelf with it's continued need for drilling equipment and consumables, offshore support services such as diving and geophysical services. The annual drilling/exploration expenditures are expected to stay relatively constant at about \$200 million per year.

- 8 -

Arctic

At the present time, a majority of the exploration in the high Arctic is being carried out by Canadian firms, Panarctic Oils in the Arctic Islands and Dome Petroleum in the Beaufort Sea. The Canadian content of this work is high, probably two-thirds of the total. Two points must be kept in mind when considering the outlook in these northern areas;

- a) Exploration is confined to a drilling season of three to five months a year, due principally to hostile ice conditions. Only when this season can be extended to year-round operations will it be economic to develop oil and gas reserves in these two areas. Next year Gulf's Arctic drilling equipment will start to extend the drilling season.
- b) When commercially viable quantities of oil are found, the offshore play will develop very rapidly. The oil companies will begin to pursue in earnest the research and field-testing work necessary to contend with ice conditions. Large commercial production will most likely not commence prior to 1990. Pilot project could start as early as 1985/86.

At present over \$400 million is spent yearly in exploration in the Beaufort and Arctic regions.

Beaufort Sea

In the medium term, exploration in the Beaufort Sea will increase along with exploration expenditures; Esso will be building more caisson islands and Gulf will start to receive the initial drilling vessel of their \$670 million Arctic drilling system. The increase in expenditures could almost double over the next medium term. It is possible that a pilot project for oil extraction could be initiated prior to summer 1986; however, this would be a limited production system. Over the next 5 years the annual exploration expenditures are expected to be in excess of \$500 million per year; equipment expenditures are expected to be \$6.9 billion in the next 10 years for the development of 3 fields.

Opportunities will be present for ice technology related expertise, drilling consumables, tools etc., clothing, catering, and production facilities and drilling facilities for ice covered seas.

- 9 -

Arctic Pilot Project

This project has not received Energy Board approval; a market must be found for gas. No time frame for project development is available as yet; however, markets are expected to be found within a year, and initial development is expected to commence prior to 1988.

West Coast

At this time there is a moratorium on drilling. Environmental impact studies will have to be completed and supportive of exploration work prior to the granting of drilling permits. Hence, limited opportunities will exist for environmental consultants, seismic firms, and geophysical consultants. At the end of the medium term there is a possibility that exploratory drilling may commence in 1987/88.

International Offshore

International Offshore Oil and Gas sedimentary basins in the world number 600; 200 have had little or no exploration for oil and gas, 240 partially or moderately explored but no commercial finds, and 160 basins are productive of hydrocarbons:

- a) Exploration is in early stages in Asia and South East Asia including China, Australia and New Zealand; tremendous potential is present there. Opportunities will exist for Canadian companies especially in Australia, New Zealand.
- b) The North Sea, Gulf of Mexico, Middle East, USA, and Mexican waters, Venezuela, Brazil and Middle East are producing areas that utilize some Canadian products at this time. There is potential to expand market penetration in these areas.
- c) Potential opportunities for oil discoveries exist off Argentina and Falklands Islands area, many areas in deeper waters off Mexico, Venezuela and in Northern Europe. The offshore areas of Africa from Nigeria to Gambia and West Africa are seeing the beginnings of oil exploration. These areas pose potential markets for the Canadian offshore sector.

The above areas offer opportunities for Canadian companies to supply services such as surveying and seismic, consulting, environmental; equipment such as downhole tools, well head manifolds, remote controlled

- 10 -

vehicles, lift balloons, processing equipment, etc. It is in the International sphere that the Department can effectively and efficiently spot key offshore markets and provide assistance for Canadian companies. The potential growth in overall development around the world is tremendous but competition will be strong from U.S. British, and Norwegian firms in particular.

Other Markets

The world market for geophysical and scientific instruments and related expertise will continue to expand as the oceans become more of a focal point; hence, the existing Canadian companies in this field can expect to have their market segments remain as is or enlarged, with significant market opportunities opening up as new areas around the world are explored.

Seabed mining for gravel and silica sands off Canada's East and West coasts is expected to take place within the medium term. These operations will require local support services and some dredging equipment; however their demands will be small compared to offshore oil and gas. Deep sea bed mining for manganese nodules and polymetallic sulphides are not expected to take place within the decade.

Interprovincial Issues

The major influence on the Ocean Industry sector is the Offshore Oil and Gas sector; this sector has implications for all provinces and industry sectors. The offshore industry will require gas/oil process equipment, marine products, scientific/geophysical support, drilling equipment, protective clothing..., the list is endless.

The interprovincial issues are expected to be the strongest in Eastern Canada but evident elsewhere also. The major issues include:

Local Benefits

On the East Coast the Provincial Governments of Nova Scotia and Newfoundland wish to create as much local employment and manufacturing as possible which could be detrimental to Canadian industry outside the local area. Hence, Federal/Provincial agreements should be aware of this situation.

- 11 -

Northern Development (Arctic and Labrador)

Native training programs, local development opportunity programs, and environmental constraints will necessitate special considerations in provincial/federal agreements.

Central Canada:

The central manufacturing provinces Ontario and Quebec should be encouraged to be more aggressive in obtaining offshore oil field development related work for their manufacturing centres. Tremendous opportunities will come available for processing equipment, scientific instruments, and support equipment of all types.

Policy Implications

- 1) Federal coordination in project development to minimize inter-regional competition for specific projects, i.e. prevention of bidding wars for jobs using Federal funds.
2. Trying to prevent a splitting of a limited market through sponsored projects that compete directly with established Canadian industry in other regions.
- 3) Continued support should be given for international marketing to capitalize on Canadian know-how and technological development. The world market for offshore equipment is expected to grow significantly and Canadian firms have the expertise to supply these markets.
4. Expand Support for R & D in order to enable Canadian firms to build up an engineering sophistication that can be utilized in the international and domestic market.
- 5) Coordination of training programs for all levels of offshore related work so that Canadians can fully partake in the supply of equipment and services required by offshore oil and gas activities.
- 6) Continued support for Canadian owned and controlled offshore support services.

October 21, 1982

ANNEX 1

**A REPORT BY
THE SECTOR TASK FORCE ON**

THE CANADIAN OCEAN INDUSTRY

Chairman T. Nickerson

EXECUTIVE SUMMARY

REPORT ON THE OCEAN INDUSTRY

BY

THE CONSULTATIVE TASK FORCE

The Ocean Industry Consultative Task Force is one of 22 industry sector task forces established by the federal Department of Industry, Trade and Commerce (DIT&C) to recommend to governments appropriate action to improve the economic performance of Canada's industrial economy.

The ocean industry in Canada is composed of those establishments which manufacture equipment or provides services for the exploitation of the ocean resources, with a particular emphasis on offshore oil and gas. Transport vessels and fisheries are excluded. The ocean industry and its associated ocean technology is a relative newcomer to the industrial scene. In 1969, sales were less than \$5 million and in 1976 it had grown to \$176 million with about \$70 million being exported. It employs about 3,200 people.

The objective of this report is to put forward recommendations which, if implemented should:

- (1) Create an environment within which the fledgling Canadian ocean industry and its associated ocean technology can develop to meet the need for goods and services arising from the exploitation of Canada's ocean resources.
- (2) Create by 1990 from 20,000 - 30,000 direct jobs in manufacturing and service industries associated with offshore resource exploitation, together with up to 150,000 indirect jobs elsewhere in the economy.
- (3) Further improve the already strong export performance of the industry.
- (4) Help to ensure that a reasonable level of Canada's future petroleum needs are met from Canadian sources developed with Canadian skills. The alternatives - a mushrooming balance of payments deficit to cover oil imports, or a shortage of petroleum - would severely impact all aspects of the Canadian economy.

The principal conclusions and recommendations are:

- (1) The ocean industry is small, fragmented and under-capitalized but, given those circumstances appropriate to an opportunity oriented, high technology, fledgling industry, it has the potential for substantial growth. Therefore governments and the federal Department of Industry, Trade and Commerce (DIT&C) in particular should noticeably and progressively increase the resources allocated towards the industrial development of the ocean industry.

- (2) Substantial growth depends primarily on the establishment of an active and stable program of exploration and development of Canada's offshore petroleum resources. Therefore, governments should create a stable economic and regulatory environment to encourage offshore petroleum activities plus increase the Canadian content of equipment and services utilized. Governments should contract out more of its ocean-oriented scientific and engineering requirements, thereby increasing industrial capabilities. The Department of Industry, Trade and Commerce should provide increased resources towards the industrial development of the ocean industry.
- (3) Export markets have been, and will continue to be an important element particularly for the manufacturing sector. The Department of Industry, Trade and Commerce support of ocean industry export marketing should be continued and strengthened. Consideration should be given to negotiation with other countries to establish reciprocal market access for specific products and services.
- (4) While future growth potential is excellent the short-term rewards are not high and substantial investment is required. Therefore government should allow equity investments in the ocean industry as a tax deduction against taxable income.

There should be established the Canadian Ocean Technology Research Authority to co-fund technology developments in industry to a level of (Can) \$100 million over five years.
- (5) A number of taxation and duty regulations adversely affect small ocean industry companies, therefore duty payment for short-term importations should be waived, permit full tax write-off of equipment in one year, through 100 per cent capital cost allowance, eliminate sales tax on equipment for offshore operations and increase tax loss carry-forward to ten years.
- (6) Projected industry growth will demand increased numbers of ocean oriented professional and skilled people. Therefore people needs should be quantified and action initiated to meet the demand. The Task Force supports the funding of Centres of Excellence.
- (7) There does not exist those supportive institutions which are normally associated with a mature industry. Action therefore has been taken by committee members to establish an Ocean Industry Trade Association.
- (8) The Task Force considered that other industrial activities in the oceans should also be investigated. The supply of equipment and services related to the fisheries is considered worthy of evaluation. Ocean mining will increase in the future.



Government of Canada Gouvernement du Canada

MEMORANDUM

NOTE DE SERVICE

FROM
DE

Mr. M.J. Taylor
Senior Policy Coordinator
Policy Coordination Group
Capital & Industrial Goods
6th Floor East

Director General
Grain Marketing Office

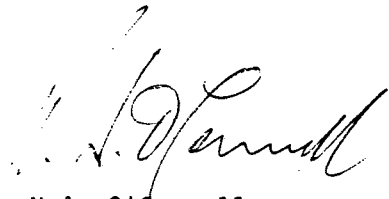
SECURITY - CLASSIFICATION - DE SÉCURITÉ
OUR FILE/NOTRE RÉFÉRENCE
YOUR FILE/VOTRE RÉFÉRENCE
DATE October 20, 1982

SUBJECT Regional Industrial Development Frameworks
OBJET

Further to the September 20th memo from Messrs. McGee and Oliver on the above subject, enclosed are five national sectoral overviews for the following sectors:

Flour Milling
Oilseeds Crushing
Vegetable Oil Refining
Barley Malting
Grain Handling and Grain Trade.

The foregoing, which are largely processing related, are considered to be major sectors of the overall grains and oilseeds sector and the ones in which there are likely to be either growth opportunities or adjustment problems or, possibly, departmental initiatives in the medium term.


N.A. O'Connell

Encs.

cc Mr. R.H. McGee
ADM, Consumer Goods, Services
and Resource Processing

NATIONAL SECTOR OVERVIEW - FLOUR MILLING INDUSTRY

SECTOR PROFILE (A) INDUSTRY IN PERSPECTIVE

Definition

Sector comprises those firms primarily engaged in the milling of wheat and other cereal grains into flour or meal or the blending of flour. In the 1971 SIC category 105 it is grouped with the breakfast cereal products sector.

Products

The major product of the sector is wheat flour. Other products include (i) flour by-products, that is, bran, shorts and middlings, (ii) flours of other cereals and (iii) prepared flour mixes. Industry production of wheat flour in 1980/81 was 1,849,500 tonnes. Production of flour by-products in 1980/81 was 635,400 tonnes. Production in 1980/81 of oat-meal and rolled oats was 36,800 tonnes and production of rye flour and meal was 11,000 tonnes.

Technology

The basic flour milling process of grinding, grading, purifying and sifting has changed little since the 19th century. Technological advance in the industry has been in the handling of materials, such as pneumatic conveying, electronic control and monitoring of flour streams, bulk handling of flour and by-products, and air classification for separation of flour fractions.

Inputs

The major inputs required by the flour milling industry are grains for milling, of which wheat accounts for the major proportion. Wheat milled in 1980/81 totalled 2,505,700 tonnes. Oats milled in 1980/81 totalled 67,300 tonnes, the quantity of rye milled was 13,200 tonnes and the quantity of barley milled was 6,400 tonnes.

Regional pattern

The majority of the flour mills are located in Ontario and Québec. The flour mills in Ontario and Québec account for over sixty-five per cent of industry milling capacity. The flour mills in the prairie provinces account for about thirty per cent of milling capacity. There is one flour mill located in Nova Scotia. One mill, is located in British Columbia.

(B) COMPETITIVE STRUCTURE OF INDUSTRY

Corporate structure

Three multi-mill firms (i) Maple Leaf Mills Ltd., owned by Canadian Pacific Enterprises Ltd., (ii) Robin Hood Multifoods Ltd., a

- 2 -

Canadian subsidiary of International Multifoods Ltd., a United States based firm, and (iii) Ogilvie Flour Mills Co. Ltd., a division of John Labatt Ltd, operate about seventy-five per cent of the milling capacity in Canada. Maple Leaf Mills Ltd operates flour mills in Montreal, Québec; Ontario at Almonte, Toronto and Port Colborne, and in Alberta at Calgary and Medicine Hat. Robin Hood Multifoods Ltd operates flour mills in Montreal, Québec; Port Colborne, Ontario; and Saskatoon, Saskatchewan. Ogilvie Flour Mills Co. Ltd operates flour mills in Montreal, Québec; Midland Ontario; Strathroy, Ontario; Winnipeg, Manitoba and Medicine Hat, Alberta.

A fourth firm Dover Industries Ltd operates three flour mills at Halifax, Nova Scotia; Preston, Ontario and Chatham, Ontario.

In addition to these four firms, some twenty-four other firms operate single flour mills of medium and small capacity. Ownership of these mills is varied with most of the smaller mills being owner operated. Some of medium sized mills are owned by corporations or cooperatives such as Steinbergs Ltd, Christie Brown and Company Ltd, Parrish and Heimbecker Ltd, and the Saskatchewan and Manitoba Wheat Pools.

Structure of productive facilities

While there are specific examples of new investment in production facilities in recent years, the industry's mills in general were built prior to World War II. In the last five years the average percentage of milling capacity utilization has been declining steadily from 85 per cent in the 1976/77 crop year to 72.7 per cent in 1981/82.

Labour characteristics

Labour intensity in the flour milling sector is relatively low. Using 1978 data, forty-two man hours were required for each thousand dollars of value-added activity.

Market structure

Domestic disposition of wheat flour in recent years has accounted for almost 75 per cent of industry production. In 1981/82, domestic disposition increased to eighty per cent of production. This increased concentration of sales to the domestic market has primarily resulted from a reduction in exports rather than any substantial increase in overall domestic consumption.

Per capita consumption of wheat flour in Canada has consistently been between 124 and 135 pounds per year in recent years. There does not appear to have been any trend towards an increase or decrease in per capita consumption over the last decade. Wheat flour is, primarily consumed in the form of bread and bakery products. Bread prices have increased sharply in recent years. During the three years from July 1979 to June 1982 the Statistics Canada Consumer Price Index for bread increased from 240.9 to 333.5, or 38.4 per cent. The impact of increasing prices on the domestic

consumption of bread will be critical to the milling industry considering the dependency of the milling industry on the domestic market. It should be noted that the price of wheat accounts for only 10 to 12 per cent of bread prices at the retail level and other factors have a more significant impact on retail prices. The Canadian National Millers' Association is supporting a national advertising program by the Bakery Council of Canada with the objective of increasing per capita consumption of bread and bakery products.

International Trade

Canadian exports of wheat flour are now at the lowest level since World War II. Wheat flour exports in the 1981/82 crop year were 348,105 tonnes compared to 508,500 tonnes in 1980/81 and 498,400 tonnes in 1979/80. In 1980/81 the export level was maintained because of unusual demand from the U.S.S.R. which resulted in exports of 182,400 tonnes to that market. Throughout the 1970's the major commercial market for Canadian flour has been Cuba. Exports to Cuba through a purchase arrangement with the U.S.S.R., accounted for about sixty-seven per cent of all Canadian exports in the five-year period 1975/76 to 1979/80. While Cuba continues to be the major commercial market, the volume of exports to Cuba declined sharply in 1980/81 to 239,700 tonnes from 348,600 tonnes in 1979/80 as additional milling capacity came on stream there. Other wheat flour exports are accounted for mainly by bilateral and multilateral food aid shipments.

World trade in wheat flour in contrast has increased over the five-year period 1976/77 to 1980/81. In terms of wheat equivalents world flour trade in each of those years was: 1976/77 - 5,813 thousand tonnes; 1977/78 - 6,544 thousand tonnes; 1978/79 - 6,681 thousand tonnes; 1979/80 - 7,495 thousand tonnes and 1980/81 - 8,362 thousand tonnes. The major growth in exports has been realized by the European Economic Community (EEC). Exports of flour by the EEC in 1976/77 were 2,400 thousand tonnes and by 1980/81 had increased to 4,331 thousand tonnes. The EEC policy of export subsidization has had a major impact on the growth of EEC flour exports, particularly in that the EEC has captured an increasingly larger share of the world commercial flour market. Another factor influencing world flour trade, is a change in the status of many traditional importers from flour importers to wheat importers as their flour milling industries have expanded.

The Canadian milling industry deals as an industry with the Cuban market. Quantities and prices for exports are negotiated each year by the industry association, the Canadian National Millers' Association, with Exportkleb, the U.S.S.R import agency, which buys for shipment to Cuba. Each member of the Association is allocated a share of the business on the basis of production capacity.

Similarly, flour mills each provide a share of the flour component of Canada's food aid which is purchased by the Department of Supply and Services on behalf of the Canadian International Development Agency. Exports of flour as food aid have declined from approximately 165 thousand tonnes in 1978/79 to about 82 thousand tonnes in 1980/81. One factor which resulted in the decline was the higher price of wheat in 1980/81 and resultant price of flour which reduced quantities of wheat and flour that could be purchased with the food aid budget. Another major factor was a decision

by the Secretary of State for External Affairs to request the World Food Program not to source flour for Vietnam in Canada.

Production Costs

The major expenditure of the flour milling industry is the purchase of its raw materials, i.e. cereal grains. Grain purchases account for about eighty-nine per cent of expenditures on all purchased materials. Wheat prices are depressed at the present time and since March 1981 the domestic selling price of wheat to millers has dropped by about \$56.00 per tonne (approximately 22 per cent). However this price decline does not give the Canadian milling industry any advantage in world flour trade as lower world wheat prices maintain the relative competitive positions of all exporters.

Profitability

Statistics Canada reports that forty companies milling flour had a net profit after taxes in 1979 of \$21.9 million whereas in 1978 forty three companies milling flour reported a net profit after taxes of \$38.3 million. These same firms reported gross profits of \$116.9 million in 1978 and \$111.7 million in 1979.

(C) IMPACT OF CURRENT ECONOMIC RECESSION

The milling industry is currently faced with significant under-utilization of capacity due primarily to a sharp decline in exports. Export sales have dropped sharply. In the August 1981 to July 1982 period flour exports were 31.5 per cent less than in the same period a year earlier and 30.2 per cent less than the period August 1979 to July 1980. This under-utilization of capacity is severely eroding profitability in the milling industry. In mid September, the one flour mill in British Columbia shut down temporarily for refinancing and is now expected to be back in operation shortly. This single mill, family-owned firm, quadrupled production capacity in 1980 with capital investment of \$1.5 million.

Industry utilization of capacity has been particularly low in recent months dropping to 58.5 per cent in May 1982.

National Sectoral Policies

The Federal Government regulates a minimum and maximum domestic selling price for wheat sold to the milling industry for domestic human consumption. Under this policy the minimum and maximum prices are \$183.72 and \$257.21 per tonne basis in store Thunder Bay for No. 1 Canada Western Red Spring Wheat, 13.5 per cent protein. The selling price is set in line with prevailing export prices within those limits. All other grades and classes of wheat are priced relative to this grade on the basis of quality discounts or premiums.

The flour milling industry benefits from the subsidy paid by the Government under Section 272 of the Railway Act to compensate the railways for the difference between the 'At and East' rate and the current compensatory rate. The 'At and East' rate on flour movement for export through eastern ports was frozen at the September 30, 1966 rate. In

- 5 -

1980 the subsidy on flour moved at 'At and East' rates was estimated at \$45.44 per tonne of flour with total expenditures of \$19.0 million.

Flour mills in Western Canada receive payments from the Government of Canada to equalize milling in transit stop-off charges in Eastern and Western Canada. In Eastern Canada the stop-off charge which the railways may assess is frozen at three cents per hundred-weight and as the compensatory stop-off is now 38 cents per hundred-weight, the subsidy is now 35 cents per hundred-weight of wheat received at the mill at the milling in transit freight rate option. The subsidy in 1980/81 amounted to about \$817 thousand, paid from the Department of Industry, Trade and Commerce's Grains and Oilseeds program.

Flour milled in Western Canada and moved to export or Eastern domestic markets moves at the statutory 'Crow' freight rate.

Should there be any change in the transportation assistance which benefits the milling industry, there would be implications for the sector outlook. In particular the sector could be expected to seek transitional adjustment assistance in order that any change in Government assistance, would have a gradual impact on the sector.

The Government has on occasion provided the industry with export credit guarantees which has enabled the industry to sell flour on up to three-year credit terms with a guarantee of repayment by the Federal Government.

The Canadian International Grains Institute in Winnipeg has conducted courses in milling and baking technologies for participants from the milling companies. The Institute has conducted a baking technology course in Cuba in conjunction with the Canadian National Millers' Association to promote better understanding and confidence in use of Canadian flour.

Medium Term Outlook: Opportunities and Constraints

A major factor which will affect the flour milling sector in the future is the quantity of exports realized by the industry. Exports to Cuba are expected to continue at about level which are planned for 1982, that is 160,000 to 190,000 tonnes. This level is substantially lower than the level of 1980/81 of 240 thousand tonnes and even further below the average level in the previous five years of 350 thousand tonnes. In the absence of alternative commercial export markets, given the environment for trade in flour which leaves only the domestic and food aid markets, there will be continued surplus production capacity. As has already occurred in the case of one mill, surplus production capacity is more likely to affect the one-mill firms.

The program to promote increased consumption of bread and bakery products is one avenue to expand the domestic market opportunities. In addition there will be growth in the domestic market in line with the population increase. Expected population growth will not however in itself compensate for the reduction that has occurred in exports.

- 6 -

The international environment for trade in wheat flour is expected to limit expansion of Canadian flour exports. Canadian millers are not able to compete in markets to which the EEC subsidizes flour exports and EEC policy also limits access for Canadian flour sales to EEC member countries. Little improvement in the international flour trade environment is foreseen.

Interprovincial Issues

Interprovincial issues in the flour milling industry are expected to be minimal given the structure of the industry. The three firms that operate seventy-five per cent of milling capacity nationally also account for the same share on a Western Canada basis. In addition, the major firms in the industry are all members of the Canadian National Millers' Association. As members share equitably basis their capacity in the major commercial exports and also share in the food aid business, province of location has not affected a firm's access to export opportunities.

With the dependency on the domestic market each mill will have to orient its production to the domestic market in their respective areas. To a major extent that type of rationalization has already occurred in the milling industry since World War II.

The under-utilization in capacity resulting from declining exports may be more severe in Western Canada where mills are more dependent on export business than for the industry on a national basis. This impact could be affected to some extent if changes in 'Crow' freight rates result in increased demand for flour by-products in the prairie provinces. If that does occur it would provide some support for additional production in Western Canada than would be the case under the current regime.

Policy Implications

A number of factors affecting the milling industry have potential policy implications. As indicated earlier the market for the sector's output is becoming increasingly concentrated in the domestic market. As the growth in the domestic market does not offset the declining exports the industry is faced with excess capacity. If the Government changes the transportation assistance which benefits the industry, further erosion of export marketings could be expected. The Government can be expected to receive requests for some form of transitional assistance which will provide time for the industry to adjust in a national manner.

As the industry becomes oriented primarily towards the domestic market, greater competition within the industry for the domestic market can be expected. Smaller less competitive firms may be unable to survive competition for the domestic market. Any adjustment assistance would have to address the possibility of increased competition leading to mill closure. The Government may be asked to explore initiatives which would permit greater utilization of capacity through such avenues as increased purchases of flour for food aid.

A further implication of increased excess capacity in the milling industry and the resultant impact on product costs is that the industry may face declining domestic demand. This could arise if imports of bakery

- 7 -

products were to continue to increase significantly. If imports do have a significant impact on the size of the domestic market some form of increased control of imports may have to be considered.

October 18, 1982

000138

NATIONAL SECTORAL OVERVIEW - OILSEED CRUSHING INDUSTRY

A. SECTOR PROFILE

I. Definition of Industry

The oilseed crushing industry consists of those firms which receive oilseeds by truck, rail or water and process them to obtain crude vegetable oils and protein meals.

The definition falls within S.I.C. 1083 (manufacturing and primary industries) but does not encompass the further processing of the crude oils into finished products, nor protein meal into vegetable protein for human consumption

II. Industry Structure

A. Background - Resources

Canada produces five oilseeds - canola, soybeans, flaxseed, sunflowerseed and mustardseed. These crops are marketed on the open market i.e. they are not under the marketing jurisdiction of the Canadian Wheat Board. These crops are of a higher value than cereals, and provide diversification in crop production and marketing. These oilseeds provide the raw material for 12 crushing plants in Canada, creating employment and value-added activity. As import replacement products and important export commodities, they provide an important and growing contribution to Canada's balance of trade.

Crushing Plants

There are 12 oilseed processing plants in Canada, which operate about 300-330 days per year on a 24-hour basis at 70-80 per cent of rated capacity.

Direct Employment

The total plant labour force is approximately 1,000 (600 in Western Canada and 400 in Eastern Canada). In addition, each plant has 10 to 20 temporary or term employees who are brought into the workforce during busy periods and then released in slack periods.

Labour Characteristics

About half of the employees at each plant are highly skilled technical operators and semi-skilled labourers, while the other half are administrative and managerial staff. The technical staff component is unionized. In Western Canada, the union is the Grain Services Workers' Union, while in Eastern Canada, the union is the Oil Chemical Workers' Union. In general, labour relations in the industry have been good, with only one plant strike in recent years.

- 2 -

(a) Western Canadian Plants

- (1) CSP Foods Limited - owned jointly by Saskatchewan
Wheat Pool and Manitoba Pool
Elevators

Saskatoon, Saskatchewan - 300 tonnes/day, canola
Nipawin, Saskatchewan - 450 tonnes/day, canola
Altona, Manitoba - 650 tonnes/day, (400 canola,
250 sunflowerseed)
Harrowby, Manitoba - 600 tonnes/day, canola
- (2) United Oilseed Products Limited, Lloydminster, Alberta
- owned jointly by United Grain Growers Limited, Nisshin
Oil Mills and Mitsubishi Corporation
- 600 tonnes/day, canola
- (3) Canbra Foods Limited, Lethbridge, Alberta
- owned jointly by Burns Foods Ltd. and Nissho-Iwai
Ltd.
- 1 000 tonnes/day, canola
- (4) Alberta Food Products Limited, Fort Saskatchewan,
Alberta
- owned by Alberta Wheat Pool
- 600 tonnes/day, canola
- (5) NARP Processors Limited, Sexsmith, Alberta
- owned by 3,800 farmer members
- Government of Alberta has extended two loan
guarantees
- 600 tonnes/day, canola
- (6) Alberta Linseed Oil Company Limited, Medicine Hat,
Alberta
- privately owned company
- 50 tonnes/day, flaxseed

(b) Eastern Canadian Plants

- (7) Victory Soya Mills Limited, Toronto, Ontario
- owned by Proctor and Gamble Co. Ltd., Cincinnati,
Ohio
- 1 350 tonnes/day, soybeans
- (8) Canadian Vegetable Oil Processing Limited, Hamilton,
Ontario
- owned by Canada Packers Ltd., Toronto
- 1 600 tonnes/day: (1 000 soybeans, 600 canola)

- 3 -

- (9) Maple Leaf Monarch Limited, Windsor, Ontario
 - owned jointly by Maple Leaf Mills Ltd., and Lever Bros. Ltd.
 - 1 380 tonnes/day: (1 100 soybeans, 280 canola, sunflowerseed, flaxseed or corn germ)

III. The Domestic Market Structure

Canada is a net exporter of oilseeds (mainly canola and flaxseed) and a net importer of oilseed products (mainly soybean meal).

The domestic market absorbs the following quantities of oilseeds each year:

Canola - 1 million tonnes
 Soybeans - 900 000 tonnes
 Flaxseed - 250 000 tonnes (estimated)
 Sunflowerseed - 75 000 tonnes (estimated)

All of the required canola, flaxseed and sunflowerseed are produced domestically. For soybeans, domestic production is increasing, but approximately 300 000 tonnes are imported to meet demand for crushing. Table I shows the annual production of Canadian oilseeds for the years 1977 through 1981.

Table I

Production of Oilseeds in Canada (Tonnes)

	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
Flaxseed	650 300	538 500	835 700	464 800	477 000
Canola/ Rapeseed	1 973 100	3 349 700	3 560 700	2 483 400	1 794 100
Soybeans	517 100	475 134	671 700	713 200	631 000
Mustardseed	79 380	103 420	53 300	90 700	82 500
Sunflowerseed	80 967	113 853	220 900	174 800	166 100

Most oilseeds are produce without contracts with crushers or exporters. However, the opportunity exists for producers to forward contract in order to lock in a favourable selling price or to obtain a guaranteed market outlet for their crop. Prices generally follow those determined on the Chicago Board of Trade, for soybeans, oil and meal, with adjustments for prevailing currency, quality and supply situations.

The processing of oilseeds yields vegetable oils (most of which are edible) and protein meal, mainly for use in animal and poultry feeds.

- 4 -

Table 2 shows the crush volume and production of vegetable oils and meals in Canada, for crop years 1976/77 through 1980/81.

Table 2

Canadian Crushings of Vegetable Oilseeds and
Production of Oil and Meal by Crop Year

(Tonnes)

<u>Crushings</u>	<u>1976/77</u>	<u>1977/78</u>	<u>1978/79</u>	<u>1979/80</u>	<u>1980/81</u>
Flaxseed	x	x	x	x	x
Canola/Rapeseed	549 174	630 300	725 100	897 300	1 003 300
Soybeans	684 995	728 400	742 600	938 400	929 700
Sunflowerseed	x	x	x	x	x
TOTAL	<u>1 234 709</u>	<u>1 358 700</u>	<u>1 467 700</u>	<u>1 835 700</u>	<u>1 933 000</u>
<u>Oil Production</u>					
Flaxseed	x	x	x	x	x
Canola/Rapeseed	225 805	259 000	296 300	364 900	418 200
Soybeans	115 616	125 600	129 000	157 000	158 900
Sunflowerseed	x	x	x	x	x
TOTAL	<u>341 421</u>	<u>384 600</u>	<u>425 300</u>	<u>521 900</u>	<u>577 100</u>
<u>Meal Production</u>					
Flaxseed	x	x	x	x	x
Canola/Rapeseed	314 903	357 500	416 700	520 800	573 600
Soybeans	540 689	575 400	576 700	738 300	731 700
Sunflowerseed	x	x	x	x	x
TOTAL	<u>855 592</u>	<u>932 900</u>	<u>993 400</u>	<u>1 259 100</u>	<u>1 305 300</u>

1/ Confidential - to meet secrecy requirements
of the Statistics Act

IV. The Export Market Structure

Canada supplies unprocessed canola, flaxseed, sunflowerseed, soybeans and mustardseed to the world market. These oilseeds are processed in the importing countries, hence the value-added benefit is exported along with the oilseeds.

In recent years, because of expanded crushing capacity Canada has been exporting increasing volumes of oilseed products, particularly canola oil and meal, soybean oil and meal, and linseed oil and meal.

- 5 -

Canadian oilseed product exports are traded in a very competitive environment, which includes U.S. and Brazilian soybeans, Malaysian palm oil, EEC rapeseed, Philippine coconut oil and a multitude of substitutable oils and meals. Canadian exports of these products amount to only 3 per cent of the world trade in oilseeds, oils and meals.

The value of Canadian exports of oilseeds and products is about \$1 billion annually, while imports amount to about \$200 million, mainly soybeans and soybean meal.

Tables 3 and 4 show the Canadian supply and disposition, by crop year, of canola and soybeans respectively.

Table 3

Canadian Supply and Disposition of Canola Oil and Meal
(Crop Year)

<u>Seed</u>	<u>1976/77</u>	<u>1977/78</u>	<u>1978/79</u>	<u>1979/80</u>	<u>1980/81</u>
	(Tonnes)				
Stocks	1 048 648	199 000	325 000	1 068 100	1 476 900
Production	836 886	1 973 100	3 497 100	3 411 100	2 483 400
Exports	1 017 871	1 013 600	1 642 295	1 742 600	1 372 600
Domestic Crushings	549 714	630 300	725 100	897 300	1 003 300
<u>Oil</u>					
Exports	91 648	73 500	109 969	151 500	198 100
Domestic Production	225 806	259 000	290 040	375 969	418 200
<u>Meal</u>					
Exports	107 088	156 300	172 476	176 300	204 000
Domestic Production	314 903	357 500	416 933	515 948	573 600

- 6 -

Table 4

Canadian Supply and Disposition of Soybeans,
Soybean Oil and Soybean Meal
(Crop Year)

<u>Soybeans</u>	<u>1976/77</u>	<u>1977/78</u>	<u>1978/79</u>	<u>1979/80</u>	<u>1980/81</u>
	(Tonnes)				
Production	250 384	580 000	515 600	671 000	713 200
Imports	391 608	262 835	350 400	422 000	394 676
Exports	24 820	64 173	90 900	54 000	141 959
Domestic Crushings	684 995	728 400	742 600	938 400	929 700
<u>Soybean Oil</u>					
Imports	26 704	28 100	26 100	29 100	7 600
Exports	---	1 400	1 800	9 000	18 700
Domestic Production	115 616	125 600	129 000	157 000	158 900
<u>Soybean Meal</u>					
Imports	339 244	376 300	480 300	439 100	368 700
Exports	51 333	45 600	41 300	42 700	74 100
Domestic Production	540 689	575 400	576 700	738 300	731 700

B. National Sectoral Policy

Over the past decade, the federal government has used DREE financial incentives to encourage the expansion of Canadian crushing capacity in Western Canada. This policy has achieved its goal of creating permanent employment and value-added economic activity in certain designated areas.

On a less formal basis, the federal government has assisted the oilseed crushing industry in the areas of research and development, production and process efficiency, market development, product handling and transportation.

At present, the comprehensive review of the grain transportation system in Western Canada has the potential to effect substantial changes on the Canadian oilseed crushing industry, in both Western and Eastern Canada. While it would be premature to predict the final outcome, it is reasonable to expect that the present disparities which adversely impact on Western crushing plants between the transport of raw oilseeds on one hand, and semi-processed oils and meals on the

- 7 -

other, will be eventually removed. If so, this could improve the competitive position of Western crushers vis-a-vis processors in Eastern Canada, depending on the level of rates prevailing east of Thunder Bay/Armstrong, Ontario.

C. Medium-Term Outlook: Opportunities and Constraints

The period 1983-88 will be characterized by the following factors:

- further expansion of world production and trade in oilseeds, oils and meals, with growth of 2 per cent annually;
- a capping of Canadian oilseed processing capacity at about 9 000 tonnes per day (4 800 in Western Canada, 4 200 in Eastern Canada);
- Canadian self-sufficiency in soybeans, oil and meal production;
- rationalization of Canadian rail transportation rates for oilseeds versus products in Western Canada;
- stabilized production of canola at 3 to 4 million tonnes per year, from 6 to 8 million acres;
- increased processing of oilseeds prior to export in the form of semi-processed oils and meals;
- greater production efficiency due to improved management and varieties;
- improved processing efficiency attributable to process research and technological developments.

A recurring problem for the canola crushing industry is the wide swing in canola production from year to year. Crushers must compete with seed exporters for the available canola supplies. This can create problems if carryover stocks are low and production is also reduced for whatever reason. Canola crushers must compete on the world market over a long-term basis, as regards pricing and delivery. An uncertain supply of raw material (canola) makes it difficult if not impossible to enter into long-term supply contracts with countries such as Algeria and India.

There are limited opportunities for vertical integration - for example, to expand refining capacity to handle all of the crude vegetable oil produced in Canada would be a mistake, since such oils lose quality during shipment, and would have to be re-refined at destination. Therefore, Canadian refining capacity will tend to be limited mainly to domestic requirements for liquid oils, margarine and shortening.

- 8 -

Most importing countries maintain tariffs on crude and refined oils. This factor will preclude a major expansion of sales to developed country markets, such as the United States.

Resolution of the statutory grain freight rate issue (Crow's Nest Rates) will have major repercussions for the crushing industries of Western and Eastern Canada. For the west, such resolution holds the promise of lower freight rates for canola oil and meal, and linseed oil and meal. For Eastern crushers, a solution to Crow will bring about increased price competition in the domestic market, with canola products offered at (potentially) lower prices. Alternatively, the crushing margins of Western processors could improve if freight rates decline to statutory levels, as for seed.

D. Interprovincial Issues

Canola is produced and processed mainly in Western Canada, while in Eastern Canada, the primary oilseed is soybeans, increasingly of domestic origin. The oils and meals of canola and soybeans are interchangeable, and price thus becomes the determining factor for end-users in choosing between the products.

The three Prairie provinces naturally promote the interests of canola producers and processors, while Ontario has generally supported the soybean interests, i.e. growers and crushers. This may change now that canola is being grown in Ontario and processed at plants in Windsor and Hamilton.

Some I.T.C. programs such as the Canola Utilization Assistance Program (C.U.A.P.) and the Interim Freight Assistance Program for Canola Products are viewed by the Ontario soybean interests as favouring canola over soybeans. However, it should be remembered that canola is sourced entirely in Canada, while self-sufficiency in soybeans is still some way off, necessitating some imports of soybeans and products from the United States. Support to the development of the canola industry can be somewhat justified on the basis that it is primarily Canadian and makes a valuable contribution to Canada's balance of trade.

The Alberta Government recently announced a \$40/tonne crushing subsidy up to \$20.4 million which covers four Alberta crushing plants. An increase from 70 to 90 per cent of tank car lease subsidy was also announced. This will place crushers in Saskatchewan and Manitoba at a competitive disadvantage.

E. Policy Implications

Existing Canadian oilseed crushing capacity is adequate with some room to accommodate further market growth. Given uncertainties attached to long term market situation with competition from developing oilseed exporters such as Malaysia and the Philippines, plans or proposals for further expansion should not be encouraged at this time.

NATIONAL SECTORAL OVERVIEW - VEGETABLE OIL REFINING

A. SECTOR PROFILE

I. Definition of Industry

The vegetable oil refining industry in Canada is that industry (SIC #421) which processes crude vegetable oils to produce refined oils for use as the main ingredient in food products such as salad oil, margarine, shortening and cooking oil.

II. Industry Structure

A. Background

The installed Canadian refining capacity in 1982 is rated at about 580 000 tonnes. The majority of the refining plants refine a complete range of oils and fats, i.e. vegetable, marine and animal oils. In 1981, fats and oils refined in Canada totalled 467 029 tonnes, of which 412 391 tonnes were vegetable oils and the balance marine and animal oils. A listing of Canadian refining plants is given in Annex A.

The industry is made up of 17 refining plants located across Canada, but concentrated in Ontario. The refineries are either independent operations, part of an oilseed crushing operation, or connected with meat packing and processing operations. Most of the refining operations are located close to the major markets in Canada, ie. Ontario and Quebec and most are considered to be efficiently sized vis-a-vis their market.

Refining Plants - Investment

The 17 refining facilities which comprise the industry are capitalized at \$80 million. Food manufacturers utilizing but not refining vegetable oils add a further large capitalization value, and their annual production is valued at \$280-300 million made up of edible oil products, such as margarine, shortening, salad oil, salad dressing, and non-dairy creamers. These companies are listed in Annex B, entitled "Fats and Oils Processors".

Approximately 45 per cent of Canadian refining capacity is foreign-owned. Most of the refining equipment is purchased from foreign sources, as there are no Canadian manufacturers.

Competitive and Input Factors

The profitability of vegetable oil refiners tends to be somewhat cyclical. Vegetable oils are normally purchased for future delivery with some spot purchasing to satisfy immediate market requirements. Refined vegetable oil prices are largely based on and influenced by the soybean and soy oil futures and cash commodity

- 2 -

markets of the Chicago Board of Trade. Some edible oil product manufacturers purchase bulk crude oil on either a forward or spot basis and have it refined by a refinery at a predetermined custom refining charge. Consequently, the competitiveness of a firm in the edible oil industry is in part based on its hedging acumen. The interchangeability or substitutability of the various major edible vegetable oils as well as the fact that the bulk of Canada's refined oils are utilized domestically in a relatively small market further contributes to the highly competitive situation in the industry. Vertically integrated oilseed firms (i.e. a combined crushing, refining and manufacturing operation) have a competitive edge but such operations are few in number, i.e. CSP Foods Limited and Canbra Foods Limited. At times export opportunities for refined oils can provide an alternate outlet for supplies.

Energy is a significant cost to the industry. All refining applications are carried out under prescribed parameters which include high steam pressure and high vacuum conditions necessitating substantial natural gas or hydroelectricity as compared to those industries utilizing petroleum as a source of energy. Energy conservation is therefore a priority issue in the industry.

Employment

Edible oil refining plants are capital-intensive rather than labour-intensive. Total industry oil refining plant labour, numbering 400, is largely composed of skilled operators, who have learned critical processing techniques, as well as the basic knowledge of standards required for any given product. There is a minimum of labour unrest in the industry.

III. Domestic Market Structure

The domestic market has continued to grow and products have become more specialized e.g. a broad range of shortenings. Vegetable oil consumption has currently achieved a level of approximately 25 kilograms per capita and this is made up of a variety of oil-based products. The interchangeability of the major oils affords most refiners an opportunity to purchase on a highly competitive basis. However, as indicated, the soybean and soy oil cash and futures markets of the Chicago Board of Trade exert a strong influence on price level. This price influence is also reflected in wholesale and retail prices although bulk discounts and rebates at that level are normal practices particularly with respect to margarine and shortenings.

- 3 -

Canadian Production of Deodorized Oils

(Tonnes)

<u>Vegetable Oils</u>	<u>1981</u>	<u>% of Total Veg. Oils</u>
Coconut	13 011	3
Corn	25 000	6
Palm	13 913	3
Peanut	4 114	1
Canola	209 207	51
Soybean	120 990	29
Sunflowerseed	16 791	4
Other Vegetable	9 365	2
Total Vegetable Oils	<u>412 391</u>	<u>100</u>
Total Deodorized Oils (Veg., Animal, Marine)	<u>467 029</u>	

IV. Export Market Structure

Canada exports only a limited quantity of refined vegetable oil. Refined oils do not maintain their quality well during long transit periods, and may need to be reprocessed at destination. Most countries including developing countries have their own refining plants suited to their particular needs. As a result, export market volume is limited for most refined oils. Some exports do take place, either blanketed with nitrogen gas, or in cans and drums to prevent oxidation and reversion in transit.

In addition, most countries impose higher tariffs on refined oils than on crude oils, to protect their domestic processors.

The Canadian International Development Agency (CIDA) is an important buyer of fully-refined vegetable oils, for distribution mainly through the World Food Program. To date, the vegetable oils purchased by CIDA have been canola and soybean oils, of Canadian origin.

B. NATIONAL SECTORAL POLICY

There is a minimum of government involvement in the vegetable oil refining industry. There are regulations with respect to product labelling and packaging, including colour restrictions in certain cases. But in general, the industry has developed and now operates in a free commercial market.

- 4 -

Federal Government assistance programs have been utilized by the industry in the areas of product research and development, production and process efficiency, and plant expansion.

The vegetable oil refining industry is highly technological. Canada has maintained a reasonable amount of research and development effort in this area but this is being done chiefly by university and government agencies, rather than by the Canadian private sector.

The facilities of the POS Pilot Plant Corporation, Saskatoon have been utilized in the past for product development work. This activity should increase in the future as membership in the facility increases. Certainly the technical expertise and equipment available at POS would encourage such use.

C. MEDIUM-TERM OUTLOOK: OPPORTUNITIES AND CONSTRAINTS

The Canadian edible oil market is expanding at an annual rate of 4 per cent in volume terms. This growth rate is expected to slow moderately due to health concerns and slower population growth in Canada.

A relatively-weak Canadian dollar has made domestic vegetable oils more attractive to end-users than imported oils, such as palm oil and corn oil. This is a positive development for Canada's balance of trade.

It is assumed that the recent trends in vegetable oil usage in Canada will continue in the near future - namely, increased consumption of indigenous vegetable oils (canola, soybean, sunflowerseed) as substitutes for palm, palm kernel, coconut, cottonseed, corn, U.S. soybean and olive oils.

Export opportunities will continue to be limited for refined vegetable oils and products.

D. INTERPROVINCIAL ISSUES

There are no pressing issues in this area. One potential irritant is the colour regulation of margarine, which falls under provincial jurisdiction. This tends to restrict interprovincial trade in margarine, with some provinces specifying a very highly-coloured product, to differentiate margarine from butter.

E. POLICY IMPLICATIONS

A submission for assistance from RDIP for a new vegetable oil refinery in Wainwright, Alberta in association with the Canada/Alberta Nutritive Processing Agreement is currently at play. Since Canadian edible oil refining capacity is at this time considered sufficient to satisfy domestic and export demand, additional capacity could impact negatively on existing refineries in Western Canada.

ANNEX A

Oil Refining Plants in Canada

1. Canada Packers Limited, Toronto, Ontario
 - (a) Locations: Toronto, Montreal, Winnipeg, Edmonton and Vancouver
 - (b) Oils Refined: all vegetable oils, lard, tallow and marine oils
 - (c) Capacity: 180 000 tonnes
 - (d) Products: salad oil, margarine and shortening
 - (e) Ownership: Canada Packers Limited - Toronto, Ontario
2. Proctor and Gamble Company, Limited, Hamilton, Ontario
 - (a) Locations: Montreal and Hamilton
 - (b) Oils Refined: all vegetable oils, lard, tallow and marine oils
 - (c) Capacity: 90 to 95 000 tonnes
 - (d) Products: salad oil, margarine, oil, and shortening (shortening oil)
 - (e) Ownership: Proctor and Gamble Company, Limited, Cincinnati, Ohio
3. Monarch Fine Foods Limited, Toronto, Ontario
 - (a) Location: Toronto
 - (b) Oils Refined: vegetable, animal and marine oils
 - (c) Capacity: 70 000 tonnes
 - (d) Products: salad oil, margarine, shortening, fractionated oils, whipped toppings, non-dairy creamers
 - (e) Ownership: Unilever, Holland and U.K. and Lever Bros. Ltd., U.S.
4. Gainers Limited, Toronto, Ontario
 - (a) Locations: Toronto, Windsor and Edmonton
 - (b) Oils Refined: vegetable, animal, marine oils, lard and tallow
 - (c) Capacity: 90 to 95 000 tonnes
 - (d) Products: salad oil, shortening and margarine
 - (e) Ownership: Greyhound Corporation, U.S.A.
5. CSP Foods Limited, Saskatoon, Saskatchewan
 - (a) Locations: Nipawin, Saskatchewan and Altona, Manitoba
 - (b) Oils Refined: Nipawin - vegetable, marine and animal oils
Altona - vegetable oil only
 - (c) Capacity: 50 000 tonnes
 - (d) Products: salad oil, margarine and shortening
 - (e) Ownership: Saskatchewan Wheat Pool and Manitoba Pool Elevators

NOTE: Also operates rapeseed crushing facilities at Saskatoon, Nipawin and Altona with a total crushing capacity of 1 350 tonnes per day.

ANNEX A

- 2 -

6. Canbra Foods Limited, Lethbridge, Alberta
- (a) Location: Lethbridge
 - (b) Oils Refined: vegetable and animal oils
 - (c) Capacity: 50 000 tonnes
 - (d) Products: salad oil, margarine, shortening
 - (e) Ownership: Burns Foods Limited, Calgary

NOTE: Also operates a rapeseed crushing facility at Lethbridge with a crushing capacity of 1 000 tonnes per day.

7. Dundas Valley Limited, Dundas, Ontario
- (a) Location: Dundas
 - (b) Oils Refined: vegetable, animal oils and tallow
 - (c) Capacity: 16 000 tonnes
 - (d) Products: shortening and salad oil
 - (e) Ownership: CSP Foods Limited, Saskatoon
8. Canada Starch Company Limited, Cardinal, Ontario
- (a) Location: Cardinal
 - (b) Oil Refined: corn oil
 - (c) Capacity: 16 000 tonnes
 - (d) Products: corn starch, corn oil and fuctose
 - (e) Ownership: Corn Products International Inc., U.S.A.
9. St. Lawrence Starch Company Limited, Toronto, Ontario
- (a) Location: Toronto
 - (b) Oil Refined: corn oil
 - (c) Capacity: 3 500 tonnes
 - (d) Products: corn starch, corn oil
 - (e) Ownership: the Gray family, Toronto

ANNEX B

Fats and Oils Processors

The major Canadian manufacturers of deodorized or refined fats and oils utilizing but not refining vegetable oils are as follows (with indication of ownership and products).

1. Standard Brands Canada Limited, Montreal - (U.S. parent)
- margarine, salad oils
2. Kraft Foods Limited, Montreal - (U.S. parent)
- cheese, margarine, salad dressing
3. L.K. Baker and Company Foods, Toronto - (U.S. parent)
- non-dairy coffee creamers
4. E. Thibault Limitée, St. Anne de la Parade, Quebec - (Canadian)
- margarine
5. L. Bernard Limitée, Shawinigan, Quebec - (Canadian)
- margarine
6. Oriole Foods Limited, Carville, Ontario - (Canadian)
- margarine
7. Lactantia Limitée, Victoriaville, Quebec - (Canadian)
- margarine
8. J.E. Bergeron and Fils Limitée, Promattonville, Quebec -
(Canadian)
- margarine
9. Gay Lea Foods, Toronto - (Canadian)
- margarine, shortening, salad dressings

NATIONAL SECTORAL OVERVIEW - MALT INDUSTRY

I. Definition of Industry

The malting industry in Canada consists of a number of plants that receive and process malting barley into brewers malt, distillers malt, and special malts. Small quantities of rye are also processed into malt.

Barley malt is specially selected barley which has been cleaned and sized, steeped, germinated (for about 4 days), dried and cleaned - all under carefully controlled conditions.

The barley malt industry falls within SIC 1089 (Other Food Products Industries, not elsewhere classified). Other products included in this basket classification are dehydrated soups, margarine, refined vegetable oils and health foods.

II. Industry Structure

A. Industry in Perspective

Canada is one of the world's major producers and exporters of barley for both feed and malting. Domestic barley consumption for livestock feed, malting and food use is between 6-7 million tonnes a year. Malt production in 1981 was estimated at 550,000 tonnes with a value of about \$155 million.

B. Domestic Market

The malting of barley to produce malt for beer has been done in Canada since pre-Confederation days. The brewing industry, which accounts for over 95% of domestic malt usage, has shown little growth in the past few years. Domestic malt usage by the brewing industry is expected to continue to grow at 1-2% per annum (or at the same rate as the growth in annual beer consumption) up to 1985. The remaining portion of domestic usage accounted for by the distilling and food industries similarly is not expected to grow significantly over the next few years.

Some idea of the growth in the malting industry from 1970 to the present may be gained from the following statistics:

Disposition of Canadian Malt

	<u>1970</u>	<u>1975</u>	<u>1979</u> (00 tonnes)	<u>1981</u>	<u>1982</u>
Consumed in Canada					
Brewing	242	293	303	328	315
Distilling	31	16	8	12	12
Food/Confectionary	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>
TOTAL	277	313	314	344*	331*
Exported	102	156	237	235	235*
TOTAL	379	469	551	579	566

*Estimates

- 2 -

Most of the malting industry is working close to capacity of 567,000 tonnes. Using the conversion formula -- quantity of malt divided by .75 -- approximately 756,000 tonnes of malting barley would be required to produce 567,000 tonnes of malt. Most of this malting barley requirement is grown in the three Prairie provinces and the industry therefore makes a significant contribution to the income of grain producers in those provinces. In any given year the sale of barley for malting purposes instead of as feed barley can mean a premium of up to \$60/tonne to an individual producer.

Three companies own the eight plants, which are distributed as follows:

<u>Plant Location</u>	<u>Annual Malting Capacity</u>
Ontario	201,000 tonnes
Quebec	65,000 tonnes
Alberta	130,000 tonnes
Saskatchewan	60,000 tonnes
Manitoba	112,748 tonnes

The three companies are:

Canada Malting Co. Limited, Toronto, Ontario

- a public company consisting of a large brewery ownership (Labatt Breweries of Canada Limited and Molson Breweries of Canada Limited each holding about 14% of shares) and other shareholders interests.
- malt houses located at:

Calgary	130,000 tonnes capacity
Winnipeg	36,000 tonnes capacity
Thunder Bay	111,000 tonnes capacity
Toronto (plant #1)	32,000 tonnes capacity
Toronto (plant #2)	37,000 tonnes capacity
Montreal	65,000 tonnes capacity
	431,000 tonnes capacity
- exports account for 35-40% of production whereas the domestic market consumes 60-65%.

Dominion Malting Limited, Winnipeg, Manitoba

- owned by Western Dominion Investment Corporation, Vancouver, B.C.
- one plant located in Winnipeg with capacity of 76,800 tonnes.
- exports account for 25% of production with the domestic market consuming the balance.

Prairie Malt Limited, Biggar, Saskatchewan

- principal ownership held by Province of Saskatchewan Crown Investment Corporation (91%) with other holdings of 9% held by Agro Company of Canada Limited, a Canadian bank and European investors.
- exports account for 85% of production as domestic consumption limited.

- 3 -

The industry in Canada is dominated by Canada Malting Co. Limited with an annual production of 431,000 tonnes or 76% of Canadian capacity. With plants located across Canada, Canada Malting Company has a large locational advantage on their competitors, both in terms of the domestic and export markets. Dominion Malting Limited sales, which represents 13.5% of Canadian production, are primarily into the domestic market but they have recently become more interested in the export market, primarily Japan. Prairie Malt Limited sales representing 10% of Canadian production depend heavily on the export market. Replacement cost of the current industry with capacity of 567,000 tonnes is estimated at \$200 million at 1980 prices.

The health of the malting industry in Canada is determined by factors such as the growth in beer consumption and hence demand for malt in Canada and overseas markets, the proportion of malt to adjunct usage in brewing and distilling, the level of export restitutions (subsidies) offered to EEC suppliers, and the ability to supply the quantities and qualities of malt demanded by overseas customers. Canadian malting companies have become known for their excellent record in supplying excellent quality products. The malt industry in Canada is presently working close to capacity and has been working at this level since 1978 in spite of the addition of new facilities in Saskatchewan (1978) and Montreal (1980) in recent years. Since domestic demand for malt has been fairly constant over the past 10 years it has been increased export sales which has allowed the industry to work close to capacity. Malt industry spokesmen generally attribute this success in the export market to the decline in value of the Canadian dollar. A further factor has been the moderation in EEC restitutions (subsidies) in recent years but this continues to be a large problem in many export markets.

In 1981 total plant shipments of malt were valued at approximately \$162 million. Domestic consumption of malt, currently around 330,000 tonnes annually, has exhibited only limited growth since 1972. Virtually all the growth has been in the export sector.

The malting industry employs approximately 600 persons, 450 of which are employed by Canada Malting. Each of the companies employs a small number of seasonal and some casual workers in order to maintain production schedules while regular employees are on holiday. The majority of the labour force is unskilled due to the large degree of automation in the production process.

Malt plants normally operate on a 24-hour basis the year round. Startups after shutdowns for maintenance generally take up to two weeks. All Canadian malt plants are unionized under the Canadian Union of United Brewery, Flour, Cereals, Soft Drink and Distillery Workers. Generally, labour management conflicts have been few and have usually been resolved without strikes.

To date vertical integration has not materialized in the Canadian malting industry with the exception of brewery holdings in the major malting company.

C. International Market Structure

Canadian malt exports have more than doubled over the last decade, i.e. from 102,000 tonnes in 1970 valued at \$11 million to 237,000 tonnes in 1981 valued at \$72 million. During this period international trade in malt has grown from 964,000 tonnes in 1970 to over 2 million tonnes in 1980. However, the current worldwide economic recession has slowed demand to some degree.

Major Malt Exporting Countries

<u>Exporting Country</u>	<u>1970</u>	<u>1980</u>
	(000 tonnes)	
EEC	423.0	1,018
Czechoslovakia	199.4	192
Australia	92.6	355
Canada	101.8	237
Argentina	14.2	70
Others	<u>134.8</u>	<u>418</u>
	965.8	2,290

Canada's market share has remained virtually constant at 9-11% of international trade while that of the European Community (EEC) increased from 44% in 1970 to a high of 65% in 1976 and then decreased somewhat to approximately 45% in 1980. The EEC and Australia are Canada's major competitors for export markets.

On a regional basis Canadian malt exports are highly concentrated. North America and Asia account for about 85% of the total. The Caribbean, Central America, South America and Western Europe account for the remaining 15%. On an area basis, major markets in 1981 were Japan, U.S.A. and various markets of South East Asia and South America.

Since 1980 Statistics Canada has ceased publishing a country breakdown on malt exports due to a change in their confidentiality regulations. However, import data from some of our major markets shows that Canadian exports to Japan in 1981 totalled 117,417 tonnes or 49% of total Canadian exports. Canadian exports to the U.S. amounted to 50,000 tonnes or 21% of our barley malt exports.

III. National Sectoral Policy

Federal Government involvement in Canada's malting industry has encompassed a number of departments, namely Agriculture Canada, Department of Regional Economic Expansion (DREE) and Industry, Trade and Commerce. The Canadian Wheat Board and the Canadian Grain Commission also impact on the domestic malting industry with respect to varietal development, quality control and pilot plant testing of malting barley to determine suitability for brewing.

Agriculture Canada (Research Branch) has been involved in the malting industry for many years through malting barley varietal development work at its regional research stations located across Canada. Also, under the Processing, Distribution and Retailing Program (PDR), Agriculture Canada and Industry, Trade and Commerce awarded a \$50,000 contract to the Brewers Association of Canada in 1979 for work on the elimination of nitrosamines (DMNA) from Canadian beers and malts which was successful.

- 5 -

DREE has given incentive grants and loans for the building and/or modernization of malt facilities in Saskatchewan, (Biggar - Prairie Malt Ltd.), Manitoba (Winnipeg - Dominion Malting Ltd.), Ontario (Thunder Bay - Canada Malting Ltd.), and Quebec (Montreal - Canada Malting Ltd.).

Over the last few years, Industry, Trade and Commerce has been involved in market development work with the industry through a survey of the world market for malt and malting barley and a special course for customers in existing and potential markets given in the spring of 1982. In previous years IT&C through the now defunct Grains and Oilseeds Market Incentive Program (GOMI), provided financial assistance to the Canadian Wheat Board to support its program of introducing improved malting varieties into the export market. IT&C's program for Export Market Development (PEMD) has been used by Dominion Malting Limited and Prairie Malt Limited for market identification trips to the Pacific Rim, South and Central America. Other IT&C sponsored market development missions are anticipated in the next eighteen months.

In addition to a general servicing role IT&C has made trade policy representations on behalf of the industry in international fora with respect to EEC subsidies and exports.

The comprehensive review of the grain transportation system (Crow rail rates) in Western Canada may affect the Canadian industry, which is heavily dependent on export markets, by making them somewhat less competitive because of higher transport costs from inland plants to export ports.

IV. Medium-Term Outlook: Opportunities and Constraints

In 1980 the Grain Marketing Office, in conjunction with the Trade Commissioner Service completed a survey of world markets for malt and malting barley. Some of the findings were:

- Global annual beer production is currently growing at about 3-4% per annum.
- World trade in malt is growing at 6-9% per annum.
- The fairly significant expansion in world trade in malt in recent years generally reflects the growth in demand for beer in many of the developing economies of the world.
- Apart from the immediate North American market the regions of greatest potential for Canadian malt are expected to be Asia, Central America and the Caribbean and South America.

Although the malting industry in Canada has been working close to capacity since 1978, there appears to be some reluctance to expand Canadian malt production. For example, non-tariff barriers, i.e. import quotas, restrict trade in some large Asian markets e.g. Japan, Korea. As well, in the nearby U.S. market new domestic plant additions are expected to be made as the current domestic malt production deficit increases. In addition, the strong competition posed by EEC restitutions (subsidies) on malt exports has apparently reduced profit margins on export sales, making it less

attractive to seek further growth in the export sector. While there appears to be good potential for increasing exports of Canadian malt, the foregoing obstacles are to some degree a constraint on the industry expanding its production facilities. The firms do, however, periodically review the situation. Many factors such as energy availability, climate, availability of resources, etc. highlight the advantages of expanding the industry in Canada. Also, recent implementation of energy conservation measures has the industry on a more up-to-date technological scale.

Some other significant constraints are:

- Periodic inadequate Canadian supplies of 2-row (Klages-type) and white 6-row malting barley supplies to meet the quality demands of certain export markets.
- Heavy costs involved in the conversion of malting facilities from direct heating to indirect heating necessary to reduce the level of nitrosamines in malt to comply with brewers' requirements in domestic and some major foreign markets.
- Lack of a hedging facility in the domestic market for malting barley under the present Canadian Wheat Board marketing system. This lack of a hedging mechanism inhibits the ability of the maltster to forward contract sales of malt.
- Irregular and infrequent ocean shipping services, combined with uncompetitive rates are making it difficult to compete in some markets, e.g. Africa, Eastern South America.
- Plant size and location including storage facilities which in the case of some maltsters, are handicaps with respect to the exploitation of export opportunities.
- The return on capital invested which some in the industry consider to be inadequate.

In conclusion, the export demand for malt is such that, in spite of a number of constraints, expansion in the Canadian industry seems quite likely and may be in the order of an additional 20%.

V. Interprovincial Issues

Export market opportunities, malt industry expansion plans, and interest of foreign investors in this sector suggest that several provinces may be vying for location of new plants. A modest locational study to pinpoint desirable regions for new plants could assist in overcoming this potential problem.

In Saskatchewan, the provincial government was instrumental in the establishment of a new malt company (Prairie Malt Ltd) in that Province. The company would not likely have survived for long without government assistance.

In Alberta it is anticipated the government will at some point in time offer development or financial incentives for the establishment of increased malting capacity in the Province.

VI. Policy Implications

It is a basic policy of both federal and provincial governments in Canada to encourage value-added processing. In this regard the agriculture sector in Western Canada has received special attention in recent years. The Canadian malting industry, by doubling its sales volume over the past ten years has made an important contribution to this goal. Most of the growth has been achieved through increased export sales.

Over the past five years the federal government through the Department of Industry, Trade and Commerce has also actively sought to reduce the effect of the EEC restitutions (export subsidies) on malt by making official representations which coupled with those by the Australian and U.S. malting industries (combined with the EEC's own attempts to reduce the subsidies burden) have to some extent modified the use of such export subsidies. However, subsidized EEC export malt continues to depress the market returns to Canadian maltsters and serve as a disincentive to capital investment in expanded capacity in Canada. Accordingly our efforts to persuade the EEC to restrain their use of export subsidies should continue.

Elements of a strategy to further encourage the growth in the malt industry should also include the following:

- (a) Improved market intelligence and industry awareness through trade missions, information sharing, research and development, consultations, etc.
- (b) Sponsoring of technical seminars in target markets (or in Canada) to be attended by invited brewing or malting industry personnel. The first of these was given this spring in Winnipeg.
- (c) Evaluation and promotion of industrial development initiatives which could contribute to the expansion and increased efficiency of the industry, e.g. joint ventures in Canada or abroad, vertical integration, locational studies to identify regions in Canada most suited to new plants.
- (d) Evaluation of the need for industry or commodity promotional material, e.g. brochures, filmstrips, etc.
- (e) Maintain close contact with the malt and malting barley interests in Canada to encourage a co-ordinated approach to such matters as the effective marketing of malt and malting barley to meet expanding export opportunities and the development of varieties of barley suited to the requirements of domestic and foreign maltsters.

To the extent possible, DRIE programs should be tailored so as to be non-discriminatory in their application. For example, industrial development should not be promoted in a designated area if the immediate result is to disrupt established industry elsewhere. On the other hand, increased capacity is warranted and should be encouraged.

GRAIN HANDLING AND GRAIN TRADE SECTOR

I. Industry Definition

The grain handling and trading sector falls within the following categories of the S.I.C.

021 Services Incidental to Agriculture
524 Grain Elevators
602 Wholesalers of Farm Products

Sector activity consists of the receipt and shipment of grains and oilseeds by primary, terminal and transfer elevators, and the marketing of these commodities by the Canadian Wheat Board, the Ontario Wheat Producers Marketing Board and private trading companies into domestic and international markets.

II. The Industry in Perspective

In 1981, the grain industry merchandised and handled cereal and oilseeds valued at about \$5.6 billion in domestic and export markets. It is estimated that the trade contributed about \$10 billion to the Gross National Product in 1981.

1981 Grain & Oilseed Exports

Commodity	Volume (000 tonnes)	Value (\$ millions)
Wheat	15,500	3,700
Barley	4,800	843
Canola (rapeseed)	1,400	464
Flaxseed	600	226
Corn	1,200	218
Rye	450	96
Oats	80	10
TOTAL	24,000	5,557

In 1979/80 the sector had approximately 14,000 employees not including grain related employees in the rail and marine segments of the grain handling system.

In 1979 the primary and terminal elevator system had an estimated replacement value in excess of 4 billion dollars. In the last two years the annual capital expenditure by the sector has ranged from \$120 to \$130 million for capital projects and repairs. For the eighties capital expenditure for modernization and expansion have been projected to be in excess of one billion dollars.

III. Industry Structure (Overview)

The grain handling and grain trade sector for the purposes of this profile is considered to consist of:

1. eight major grain handling companies in Western Canada operating 1,975 operating units^{1/} at 1,217 country shipping stations.
2. an estimated 165 grain dealers in eastern Canada operating an estimated 255 inland elevators.
3. five inland terminals located in western Canada.
4. nineteen export terminal elevators located at Thunder Bay, Churchill and on the West Coast.
5. twenty-seven transfer elevators located mainly in the St. Lawrence Seaway system in Eastern Canada.
6. the Canadian Wheat Board, the Winnipeg Commodity Exchange, the Ontario Wheat Producers Marketing Board, 12 major grain trading companies and 28 licensed grain dealers.

A. Primary Elevator System (Western Canada)

Primary elevators receive grain by truck from producers, store it temporarily and load it into rail cars for shipment to an export terminal or to other destinations for domestic use. There are 8 major grain handling organizations

^{1/} At those shipping points where a grain company operates two or more elevators, the operations have been combined under a single manager, hence 1,975 operating units from 2,934 licensed primary elevators.

operating 1,975 primary elevator operating units located at approximately 1,217 country shipping stations throughout western Canada. Of the 1,975 operating units 54% are located in Saskatchewan, 30.5% in Alberta, 15.0% in Manitoba and 0.5% in British Columbia.

The primary elevator system has a total storage capacity of 8.1 million metric tonnes. The storage capacities of primary elevators range from a few older facilities as small as 700 tonnes up to a high of 25,000 tonnes. A typical modern

- 3 -

elevator costs in excess of \$1 million and has a storage capacity ranging from 3,600 to 5,500 tonnes. The average elevator annually ships about 2.5 to 3.0 times its storage capacity.

A large percentage of the elevators in operation were built 45 to 50 years ago. In the past 15 years many elevators have been closed and the remaining plants have been modernized with new equipment. The industry has offset the decrease in total storage capacity by rationalization, automation, improved design and better management thereby handling more grain per man employed and more grain per tonne of storage capacity.

There are approximately 2,500 primary elevator managers and assistants employed by the eight major grain companies. The Grain Services Union represents about 1,200 elevator managers covered by collective agreements with Saskatchewan Wheat Pool and Manitoba Pool Elevators. The other six grain companies account for the remaining 1,300 managers but do not have collective agreements.

The ownership of the primary elevator system by individual companies ranges from a low of 2.4% to a high of 31%. The ownership distribution is exhibited in the following table.

- 4 -

Summary of Primary Elevator
Ownership by Operating Units
as of August 1, 1982

Company	Ownership	Operating Units	
		Number	Percent
Saskatchewan Wheat Pool	Producer Co-operative	613	31.0
United Grain Growers Ltd.	Producer Co-operative	348	17.6
Alberta Wheat Pool	Producer Co-operative	342	17.3
Pioneer Grain Co Ltd.	James Richardson & Sons	243	12.3
Manitoba Pool Elevators	Producer Co-operative	167	8.5
Cargill Ltd.	Cargill Inc., U.S.A.	140	7.0
Paterson & Sons Ltd. N.M.	Canadian privately owned	62	3.2
Parrish and Heimbecker Ltd.	Canadian privately owned	47	2.4
Others		13	0.7
TOTAL		1,975	100.0

B. Inland Elevator System (Eastern Canada)

Inland elevators in Eastern Canada originate grain primarily for domestic use. In recent years Ontario inland elevators have originated grain in increasing volumes for export markets.

Of the estimated 255 inland elevators in eastern Canada, 90.6% are located in Ontario, 6.7% in Quebec and 2.7% in the Maritimes. The inland elevator distribution by province is exhibited in the following table.

- 5 -

Eastern Canada Inland Elevators
by Province as of January 1, 1981

Province	Number	Storage Capacity (tonnes)
Ontario	231	1,605,400
Quebec	17	114,000*
Prince Edward Island	3	22,100
Nova Scotia	3	7,000
New Brunswick	1	2,300
TOTAL	255	1,750,800

* Includes 42,000 tonne Cargill terminal at Quebec City.

In Ontario inland elevators receive, store, condition and market grains primarily to processing facilities for domestic use (i.e. feed mills, flour mills, food processing and industrial uses). In addition to this primary role, Ontario inland elevators originate grain for export markets. In 1979/80 Ontario inland elevators originated 419,000 tonnes of wheat (59% of production) and 344,000 tonnes of corn (8% of production) for export markets. The ownership of the inland elevator system is distributed among an estimated 155 independent operators. The largest grain companies are W.G. Thompson & Sons Ltd. and United Co-operatives of Ontario which operate approximately 10% and 5.4% respectively of Ontario's total inland elevator storage capacity. Of the 231 inland elevators in Ontario about one-half manufacture feed products in addition to handling and marketing of grains.

In Quebec, producer co-operatives own and operate most of the 17 inland elevators which are primarily used to receive, store and ship producer grain to local feedmills.

In the Maritimes 7 inland elevators receive grain from producers for delivery to local feedmills for domestic use. In Prince Edward Island, the P.E.I. Grain Elevator Corporation (a provincially owned crown corporation) owns and operates the 3 inland elevators. In Nova Scotia, the Nova Scotia Grain Commission owns and operates 2 inland elevators and rents a third elevator to a private concern. In New Brunswick the single inland elevator at Florenceville owned by the Carlton Co-op was jointly financed in 1976 by the New Brunswick provincial government (20%) and the federal government (80%) through the Department of Regional Economic Expansion.

- 6 -

C. Terminal and Transfer Elevator System (National)

Terminal and transfer elevators receive grain by rail in hopper and boxcars from primary elevators in Western Canada. The grain is cleaned (and dried if necessary) and stored for shipment.

Eastern grain movement from Thunder Bay consists of lakers moving the bulk of the grain to transfer elevators while about 8% moves by salt water vessels direct to export markets. The larger transfer elevators located on the lower St. Lawrence River receive grain from lakers, store it and load salt water vessels destined for export markets. The majority of the upper St. Lawrence and Great lakes transfer elevators receive grain for domestic use in Ontario and Quebec. The eastern movement shipping season is about 7 months although small quantities of grain move east by rail during the winter months.

Western grain movement consists of salt water vessels loading direct from terminals at Vancouver and Prince Rupert 12 months of the year. The Churchill terminal loads grain on salt water vessels 3 months of the year following the summer break-up of ice in the Hudson Bay.

There are 19 export terminal elevators with a combined storage capacity of 3,215,900 tonnes. Of the total storage capacity 65% is located at Thunder Bay, 31% on the West Coast and 4% at Churchill. In addition, there are 5 inland terminal elevators in western Canada with a combined storage capacity of 478,860 tonnes.

There are 27 transfer elevators with a combined capacity of 3,690,430 tonnes. These elevators are similar in design to terminal elevators but are not equipped for grain cleaning. They are used for receiving, storing and transferring grain that previously has been officially inspected and weighed at a terminal facility. Of the total storage capacity 53% is located in 9 elevators in Quebec, 42% in 16 elevators in Ontario and 5% in 2 elevators in the maritimes.

There are about 3,760 terminal and transfer elevator employees (union and managerial) in Canada. The following table is an estimate of the number of employees by port location.

- 7 -

Terminal Elevator Employees by Port Location

Port Location	Number of Employees
Thunder Bay	1,700
Vancouver	660
Prince Rupert	110
Churchill	120
Great Lakes Transfer Elevators	300
Lower St. Lawrence Transfer Elevators	800
Maritimes Transfer Elevators	70
TOTAL	3,760

Grain handlers are employed by the grain companies and operate grain handling equipment within the terminals. Longshoremen or stevedores operate the loading belts outside the terminals which place grain aboard ships. Longshoremen work for stevedoring companies and are not employed by the grain companies. Longshoremen work crews are dispatched to a terminal from a union hall in response to a request for one or more crews for a particular work shift.

Terminal and transfer elevator employees are represented by about 8 separate unions including the Grain Handlers at Thunder Bay; the Grain Workers' Union (Local 333 C.L.C.) at Vancouver; the Public Service Alliance representing separately Federal Grain Inspectors and Weighers/Samplers; and the International Longshoremen Association, Steel Workers of America and the Canadian National Tradesmen Union representing workers in the Lower St. Lawrence elevators. In addition, the International Longshoremen's and Warehousemen's Union represents stevedores who perform ship loading activities.

The Canadian grain handling system has a high degree of vertical integration from the point of view that the major primary elevator operators generally also own and operate terminal elevators and to a lesser degree transfer elevators. The ownership distribution by percentage of storage capacity for terminals is shown in the following table.

- 8 -

Summary of Terminal Elevator Ownership
by Storage Capacity*
as of August 1, 1982.

Organization	Storage Capacity (tonnes)	Percent
Saskatchewan Wheat Pool	1,241,785	38.6
United Grain Growers Ltd	424,110	13.2
Manitoba Pool Elevators	403,005	12.5
Alberta Wheat Pool	402,320	12.5
James Richardson & Sons Ltd.	318,030	9.9
Cargill Ltd.	176,020	5.5
National Harbors Board (federal gov't)	140,020	4.4
Prince Rupert Grain Terminal Consortium Ltd.	63,010	1.9
Parrish & Heimbecker Ltd.	47,600	1.5
TOTAL Storage Capacity	3,215,900	100.0

* export terminal elevators located at Thunder Bay, the West Coast and Churchill.

Note: Pacific Elevators Limited storage capacity was assigned to joint owners: Alberta Wheat Pool (60%), Saskatchewan Wheat Pool (30%), Manitoba Wheat Pool Elevators (10%).

The Canadian Grain Commission's role in terminal operations, in addition to regulatory responsibilities under the Canada Grain Act included the management of operations of six federally owned Canadian Government elevators. However, during the 1979-81 period the federal government reduced its involvement in the grain industry by selling the six elevators. The Lethbridge, Calgary and Edmonton terminals were sold to the Alberta Government; Prince Rupert was sold to a prairie grain companies consortium and the Saskatchewan terminal was sold to Northern Sales Ltd., a privately owned Canadian grain trading company. Early in 1981 the Moose Jaw terminal was sold to Allstate Grain Company Limited of British Columbia.

- 9 -

D. Grain Trade (National)

There are four main elements involved in the marketing of Canadian grains and oilseeds in domestic and export markets. They are:

1. the Canadian Wheat Board
2. the Winnipeg Commodity Exchange
3. the grain trading companies
4. the Ontario Wheat Producers Marketing Board

1. Role of the Canadian Wheat Board

The Canadian Wheat Board was established by Parliament in 1935 to provide a marketing agency for Western Canadian wheat. The main objective of the CWB is to market grain in an orderly manner in interprovincial and export markets. The Board's jurisdiction in 1949 was extended to oats and barley grown in the designated area which is all of Manitoba, Saskatchewan, Alberta and the Peace River area of Northern British Columbia.

Under the federal government's feed grain policy which became effective on August 1, 1974, feed wheat, oats and barley sold in the domestic market were removed from exclusive Board jurisdiction and placed on the open market. In July of 1976 the feed grains policy was changed to establish the Board as a residual supplier of feed grains to the domestic market on a U.S. corn competitive pricing basis. Buyers have the option of purchasing feed grains directly from the Board at this corn competitive price or on the open market from the private grain trade at prices established through the operation of the cash and futures market of the Winnipeg Commodity Exchange.

The Board however remains the sole purchaser of wheat, oats and barley for export and for human consumption in Canada.

Over the past five years there has been a trend towards more direct CWB sales to importing countries and less use of Board agents. Based on a 5 year average, the CWB sells 85% of the wheat, 75% of the barley and 30% of the oats directly to foreign buyers. The total value of Board grains in the 1980/81 crop year was \$5.6 billion.

The Canadian Wheat Board has its head office in Winnipeg, regional offices in Montreal and Vancouver and overseas sales offices in London and Tokyo. In 1972 the CWB employed 724 permanent and 84 temporary employees. Over the years the CWB has

- 10 -

reduced its manpower requirements by efficient management and computerization. In 1981 the CWB employed 567 permanent and 69 temporary employees.

2. Role of the Winnipeg Commodity Exchange

The Winnipeg Commodity Exchange is a voluntary, unincorporated non-profit organization which provides the facilities necessary for trading grain. The exchange operates a cash market and a futures market for rapeseed, flax, rye and feed grains. The Winnipeg Commodity Exchange employs about 26 people.

3. Role of the Grain Trading Companies

There are 12 major grain trading companies in Canada operating mainly out of Winnipeg, Manitoba. In addition to the major companies there are in excess of 28 licensed grain dealers operating in Canada.

The grain trading companies are engaged in the following trade activities:

- The marketing of non-Board grains such as rapeseed, flaxseed and rye to domestic and export markets; and feed wheat, oats and barley to the domestic market.
- The marketing of special crops such as sunflowerseed, mustardseed, buckwheat and pulses to domestic and export markets.
- Fobbing function: as the Wheat Board makes government to government sales it tenders to the private trade to perform fobbing services including stevedoring services and documentation.
- The marketing of Ontario grains (i.e. corn, barley, soybeans) into domestic and export markets.
- marketing of Board grains: the CWB sells wheat, barley and oats to the private grain companies who in turn seek out markets on a day-to-day basis.

There are about 400 non-union employees involved in trading and trade related duties.

The following table shows the major trading companies and ownership.

Major Grain Trading Companies Operating in Canada in 1982

Company	Ownership
Cargill Limited	Cargill Incorporated, U.S.
Xcan Grain Limited	Saskatchewan Wheat Pool, Alberta Wheat Pool, Manitoba Pool Elevators
United Grain Growers Limited	producer co-operative
Northern Sales Company Limited	Canadian privately-owned
James Richardson & Son Limited	Canadian privately-owned
Pioneer Grain Company Limited	Canadian privately-owned
Louis Dreyfus Corporation	Louis Dreyfus Inc., U.S.
Parrish & Heimbecker Limited	Canadian privately-owned
Alfred C. Toepfer (Canada) Ltd.	Alfred C. Toepfer, Germany
Continental Grain Co. (Canada) Limited	Continental Grain, U.S.A.
Bunge of Canada Limited	Bunge, U.S.A.
N.M. Paterson & Sons Limited	Canadian privately-owned

4. Role of Ontario Wheat Producers Marketing Board

The Ontario Wheat Producers Marketing Board is charged with the responsibility for the purchase and sale of wheat produced in Ontario. Producers are responsible for delivery of the wheat to one of approximately 170 country agents and the Board is then responsible for movement of the wheat from agents to processing firms and export locations. The Board operates a wheat pool under which producers receive an initial payment on delivery of grain and additional payments based on average sales returns minus the Board's marketing costs. The Wheat Board has its head office in Chatham, Ontario and employs 15 people.

IV. Competitive Structure of Industry

A. International Trade

As shown in the following table Canada's market share of world wheat trade has decreased slightly over the past 5 years although in absolute terms wheat exports have increased from 13.4 million tonnes in 1976/77 to 16.3 million tonnes in 1980/81. In 1980/81, Canadian barley exports represented about 30% of world barley trade.

- 12 -

Canada's Market Share for
Wheat and Barley

Commodity	1976/77	crop years			1980/81
		1977/78	1978/79	1979/80	
- percent -					
Wheat & Wheat flour	21.6	22.1	18.4	18.1	17.5
Barley	33.0	26.0	28.0	30.0	30.0

As illustrated in the following table Canada continues to hold a dominant market share in world canola (rapeseed) and flaxseed trade.

Canada's Market Share for
Canola and Flaxseed

Commodity	1977	Calendar year		
		1978	1979	1980
		- percent -		
Canola (rapeseed)	79	88	90	85
Flaxseed	86	61	84	80

Canada's corn exports have increased significantly from 180,000 tonnes in 1976/77 to over 1 million tonnes in 1980/81. Over the same period, rye exports increased from 168,000 to 446,000 tonnes.

B. Profitability

In 1980/81, total net earnings before taxes of the major grain companies was about \$196 million, up 6.5% from \$184 million in 1979/80. The financial results of the major grain companies are shown in the following table.

- 13 -

Financial Results of Major
Grain Companies for 1980/81*

Company	Total Gross Sales	Net Earnings Before Taxes
- millions of dollars -		
Saskatchewan Wheat Pool	1,941.4	72.7
United Grain Growers	1,374.6	11.6
Cargill Ltd.	1,277.0	19.8
Alberta Wheat Pool	1,391.0	34.6
Manitoba Pool Elevators	454.3	18.4
Others (estimated)	1,600.0	39.0
TOTALS	8,038.	196.

* financial year ending July 31, 1981 except for Cargill which is May 31, 1981.

(Note: net earnings before taxes as a percent of total gross sales is not a meaningful tool to compare the above grain companies because in several cases net earnings include significant levels of earnings transferred from subsidiaries).

Historically, the profit levels of grain handling companies have fluctuated from year to year depending on the volume of grain production. Accordingly, a grain company in its financial planning can not be unduly influenced by the profit level in a single year in its country operations. Rather, grain industry planning must be based on the average experience over a four or five year period.

The grain companies' strategy over the past ten years has been to diversify into the processing of grains and oilseeds. This strategy has somewhat stabilized the volatile nature of depending solely on grain handling for revenue. For example, CSP Foods Ltd. is jointly owned by Saskatchewan Wheat Pool and Manitoba Pool Elevators.

V. National Sectoral Policy

Despite variations in trend as witnessed by the current downswing in the market this year, demand for food at the world level is expected to increase largely because of population pressures, albeit at a slower pace than prevailed during the last decade. Cereal grains and oilseeds are likely to continue to be the mainstay of trade to meet this demand.

- 14 -

Canada has traditionally been a major exporter and will continue to play a major role in meeting increased world demand. While its relative percentage share of international grains and oilseeds trade may level off or decline because the longer term world market is predicted to increase and Canada's potential to exploit it may be constrained by the factors of land base and climate, absolute volumes of bulk commodities exported should nevertheless continue to increase as efforts continue to maximize production potential. The CWB's export targets of 30 and 36 million tonnes by 1985 and 1990 respectively are regarded as reasonable and obtainable objectives but will require substantial increases in production in the remainder of this decade. The bulk of this production increase will come out of Western Canada i.e. the prairie provinces, but significant progress should also continue in Eastern Canada, particularly Ontario. Producer response to anticipated demand will be governed to a major extent by world prices.

In the 70's Canada's export performance was constrained by bottlenecks in the transportation and handling system. These have been largely overcome in the short term but the process of rationalization, modernization and investment must continue to avoid recurrence of problems in the future. A major element of this process is the reform of rail freight rates for grains and oilseeds currently under discussion. The eventual outcome of this latter exercise may, over the longer term, have positive effects in terms of diversification of the crop production base and agricultural processing in Western Canada. Over the remainder of this decade, the main emphasis in Government policy will likely focus on support for the infrastructure - research and development, varietal improvement, introduction of agronomic advances, and continued improvements in the handling transportation system - required to achieve export targets for the major grains and oilseeds and on prospects for diversification and processing.

VI. Related Institutional Factors

In addition to the governmental and private institutions and bodies already mentioned, the following also have a major regulatory role in the industry.

- 15 -

The Canadian Grain Commission (CGC) which reports to the Minister of Agriculture is the main regulatory arm of the grain industry. Pursuant to the Canada Grains Act the CGC provides for official inspection and grading of grain across Canada. Under this general authority the CGC sets maximum grain handling and storage tariffs which the grain companies can charge producers for grain handling services, licenses elevator operators and grain dealers, performs official weighing of grain at terminals, and collects, compiles and publishes basic statistics on grain handling and storage within the licensed elevator system. The CGC is also responsible for the administration of the Grain Futures Act which involves supervision of the Winnipeg Commodity Exchange. The authority of the CGC does not presently extend beyond the western primary elevator nor the terminal and transfer elevator system. Although the inland elevator system in Eastern Canada is not currently under the jurisdiction of the CGC, most of the provinces have provincial legislation which to some degree regulates inland elevators and domestic grain marketing. For example, the Ontario Grain Elevator Storage Act requires the licensing of all inland elevators in Ontario offering a storage service to farmers.

Labour Canada's role in elevator operations includes environmental (dust control) and safety regulations, hours of work regulations and a conciliatory role in mediating labour disputes. The Federal Government has occasionally enacted back to work legislation with respect to striking elevator workers but the normal course of action is the appointment of a federal conciliator.

VII. Impact of Current Economic Recession

The economic recession in North America over the past year and reduced purchases by the USSR of US grain resulted in reduced movement of iron ore, coal and US grain exports through the St. Lawrence Seaway system. Also, non-grain bulk commodities moving through the West Coast were reduced as a result of the recession. A significant portion of Canada's record grain exports in 1981/82 was due to the grain industry's ability to take advantage of this excess handling and transportation capacity throughout the Canadian system.

VIII. Medium Term Outlook: Opportunities and Constraints

General Overview

In 1976, the Canadian Wheat Board projected an export volume of 30 million tonnes by 1985 and 36 million tonnes by 1990. These predictions were based on the assumption that Canada would maintain its historical market share, 20 - 25% for wheat and 5 - 10% for coarse grains, of the rapidly growing world trade in wheat and coarse grains.

- 16 -

The rapid growth in the international grain trade of the 1970's has not and is not expected to be repeated in the 1980's. The human need for grains continues as world population growth increases but the effective demand or importing countries' ability to finance grain imports is expected to regulate the growth of the grain trade throughout the 1980's.

Over the past two years, grain exporting nations have been burdened with surplus grain stocks, especially the U.S., stagnant world demand and low grain prices. World demand for grain has been influenced by sluggish economies, lack of significant buying by major grain importers, relatively weak European and Japanese currencies as compared to the U.S. dollar and growing financial debt by several importing countries.

In the 1970's, Canada did not fully participate in the rapid growth of the international grain trade primarily due to grain transportation constraints. Throughout the 1970's the grain hopper car fleet was significantly increased largely by the federal government.

In 1981/82 crop year, Canada - with an improved grain transportation system, increased grain exports to a record level of 27.3 million tonnes as compared to the previous record of 23.3 million tonnes set in 1979/80. The main reason for the significant increase was due to increased exports to the Soviet Union.

Opportunities and Constraints

The world grain outlook is not expected to improve significantly in the first half of 1983, but in spite of the poor overall economic climate Canada should be able to export 25 - 27 million tonnes of grain in the 1982/83 crop year.

The major constraints to increased Canadian grain exports in the 1980's are as follows:

Production capabilities: - Uncertainty as to whether Canada can achieve the 50% production increase required to sustain an export volume of 36 million tonnes by 1990.

Transportation Capacity: - Presently, Canada has sufficient rail transportation capacity for grain, but a satisfactory resolution of the Crows Nest freight rate issue is critical to obtain the required railway capital investment to insure future rail capacity to meet the 1985 and 1990 grain export targets.

Global Economic Situation: - Due to the severe financial problems of many grain importing countries in today's depressed world economy, grain exporting nations will have to continue to provide credit arrangements to grain buyers

- 17 -

to remain competitive with other exporters. Importers are purchasing only their immediate needs and holding minimal stocks and this is contributing to depressed prices.

IX. Interprovincial Issues

There are two major interprovincial issues:

1. Crows Nest Freight Rates

The Gilson report on western grain transportation (Crow rail rate), inter alia, recommended that the Crow benefit (gap between the Crow and a compensatory rate in 1981/82), amounting to \$644.1 million, be paid to the railways in 1982/83 with an increasing portion of this payment thereafter being paid to the producer until 1989/90 when the portion would be fixed at 81% to the producer. Although there are several issues in the Crow debate on which there is not a consensus in Western Canada, the most divisive issue is the manner in which the Crow benefit should be paid.

One group of producer organizations, support a direct payment to grain producers arguing that a direct federal payment to the railways would maintain current freight rate distortions acting as an impediment to the growth of the livestock industry, crop diversification and agricultural processing in Western Canada.

Another group of producer organizations, led by the Manitoba, Saskatchewan and Alberta Wheat Pools support a direct Federal Government payment to the railways. Their rationale is that a producer payment could be seen at some future time as merely a subsidy to farmers and could be removed by some future government. As well they argue that the most effective way of ensuring that railways provide good service is to make payments of the benefits conditional on performance. Also, the Wheat Pools are proposing that western livestock producers receive a government subsidy (joint federal-provincial) to offset the relatively high feed grain costs due to artificially low rates under the Crow freight rate regime. If grain freight rates were at a compensatory level it is argued that feed grain costs to livestock producers would be proportionably reduced in Western Canada.

Eastern Canada, especially Quebec, is opposed to the direct payment option and has expressed concerns about the possible impact that it could have on agricultural production and processing in Eastern Canada.

On August 4th, the Federal Government accepted the main thrust of the Gilson report and established three task forces to resolve outstanding technical questions. The task forces on the freight rate structure, central co-ordinating agency and

- 18 -

legislation are to report to the government in the period to mid-November. A proposed task force on the method of payment of the Crow Benefit was not formally established due to conflicting views within the industry on this issue. Rather the opposing groups led by the PFCC and the Prairies Pools were encouraged to refine their respective positions for government consideration. The opposing groups are now of the opinion that further work on resolution of the Crow issue cannot be advanced further until a government decision on the payment of the Crow Benefit is taken. It is currently anticipated that the Minister of Transport will be bringing forward proposals to cabinet in this regard by the end of October.

2. Domestic Feed Grain Policy

Background

The policy, introduced in August 1974, grew out of major concerns both in Eastern and Western Canada with respect to the equity in pricing of feed grains in the domestic market. Surplus supply conditions which developed in Canada and world markets in the late 1960's and early 1970's were reflected in a price differential between western feed grain sold on local Prairie markets and that marketed elsewhere in Canada. Prompted by burdensome supplies, western feed grain producers sold heavily into the local off-Board market as was their option within each of the Prairie provinces. The result was depressed prices in the Prairies compared with the world price and the price paid for western feed grain by users in the rest of Canada who were obliged to pay the Board's export equivalent price. Strong and frequent representations were received by the Federal Government, particularly from Quebec feed grain users on this price issue.

The interim policy of 1973 and the Domestic Feed Grain Policy of 1974 were designed to address this price situation and enable freer access to lower priced western feed grains by livestock producers in Eastern Canada and British Columbia. Sale of feed grains interprovincially for domestic use was removed from exclusive CWB control and vested in the private grain trade.

The 1974 policy originally envisioned that the CWB as residual supplier to the domestic market, would make offerings of domestic feed grains through the mechanism of the Winnipeg Commodity Exchange. In January 1975 the CWB withdrew from the WCE and reverted to offering feed grains into the domestic market on a flat basis at prices related basically to export price levels.

By 1974 the world grain market situation had turned around and now featured rising demand, limited supplies and relatively high prices. Producer deliveries to the off-Board feed grain market declined, supplies of western feed grains in Eastern position were short, and the CWB was called on to supply

- 19 -

significant quantities of Board grains to eastern markets at the export price level (which was high in relation to the off-Board price). In the face of widening regional price differentials and dissatisfaction of Eastern Canadian users of western feed grain, the CWB examined pricing its domestic offerings on a U.S. corn competitive basis.

On August 1, 1976 the CWB began offering western feed grain into the domestic market at U.S. corn competitive prices established by formula. The formula was developed at the request of the government by the CWB and the CLFB and was accepted by both agencies as "fair value" for grain producers. The formula computes domestic feed grain price on basis of price of U.S. corn and soymeal landed at Montreal. In most situations the formula price is in effect a ceiling on domestic feed grain prices.

Current Status

Problems with the current policy emerged in December, 1981 when the Canadian Wheat Board announced it wanted to stop offering feed grains at corn-competitive prices because it was losing revenues by selling western feed grain domestically. During most of 1981 export barley was valued at a premium over corn resulting in increasing pressure from western producer groups to change the domestic feed grain policy.

On March 17, 1982 the federal government introduced an interim feed grain policy to offset the financial losses to western grain producers. Until the close of 1982 navigation season, the federal government will reimburse western grain growers, up to a maximum of \$8 million, for any lost revenue resulting from wheat Board sales at corn-competitive prices.

In the interim period up to the end of December 1982, Agriculture Canada and the Grain Marketing Office of Industry, Trade and Commerce are conducting a full review of the domestic feed grain policy. Industry consultations were held during August and the federal working group is currently formulating a discussion paper which will be submitted to all departments.

It is expected that a memorandum on the domestic feed grain policy will be submitted to Cabinet in November, 1982.

IX. Policy Implications

To further the expansion and competitiveness of the grain handling and grain trade sector the department should support, or where appropriate initiate, work in the following areas:

1. Grain Production Research - support additional production research for grains and oilseeds with the objective of ensuring that Canada can consistently produce sufficient volumes of those types and classes of grain that are in demand in world markets.

- 20 -

2. Grain Export Transportation Capacity - support resolution of the Crows Nest freight rate issue which is critical to ensure future rail capacity to meet the 1985 and 1990 grain export targets.
3. Grain Export Credit - continue to review and develop Canadian grain credit policy and monitor the credit arrangements of other exporters to ensure our competitiveness.

MICROFILMED
MICROFILMÉ