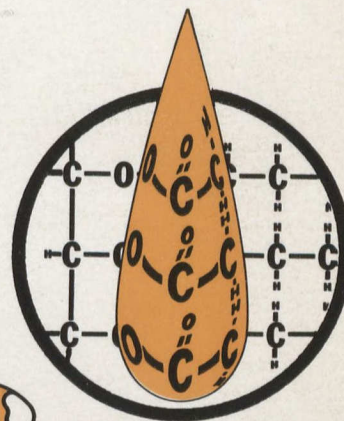
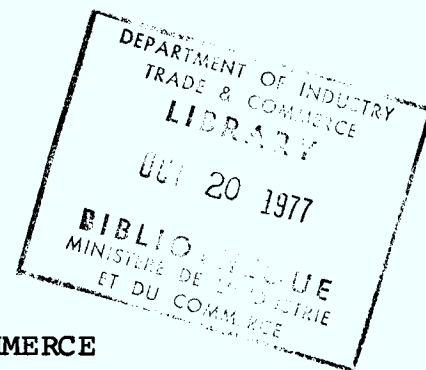


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Fats & Oils in Canada

ANNUAL REVIEW 1976



DEPARTMENT OF INDUSTRY, TRADE AND COMMERCE

FATS AND OILS IN CANADA

ANNUAL REVIEW

JUNE 1977

Prepared by:

Grain Marketing Office
Department of Industry, Trade and Commerce
Ottawa, Ontario
Canada K1A 0H5

Contract No.: 08KT 67002-7-108-1023

ADDISON & STEELE
Printers & Publishers

ERRATA

- Page 19 "(Pounds)" which appears in the Yield portion of Table 5 should be dropped one line so that it applies only to mustardseed and sunflowerseed.
- Page 21 "539,671" the last figure in the last line of Table 7 should read "639,671".
- Page 32 "Labanon" under the Destination column of Table 13 should read "Lebanon".

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INTRODUCTION

"Fats and Oils in Canada - Annual Review 1976" represents the fourth annual issue of the publication. No issues were published for the years 1970 to 1973 inclusive.

The feature article in this issue provides information on federal assistance in market development for the Canadian fats and oils industry. It explains the origin of government assistance to the industry, indicates the organizations and programs involved and examines the basis focus of such assistance.

The statistical data contained in the publication has been obtained from Statistics Canada, Environment Canada, Canadian Grain Commission, United States Department of Agriculture, and Oil World. The tables resulting from this data have been grouped into related product areas to permit ease of consideration. The total figures in the tables, particularly those dealing with imports and exports, have been rounded which accounts for any apparent discrepancies in the totals.

"Fats and Oils in Canada - Annual Review 1976" is intended to be a working document for people concerned with the development of the Canadian fats and oils industry. Suggestions and comments on this publication are welcome and should be addressed to:

Grain Marketing Office (40A),
Department of Industry, Trade
and Commerce,
Ottawa, Canada.
K1A 0H5

CHAPTER 1

FEDERAL ASSISTANCE IN MARKET DEVELOPMENT FOR THE CANADIAN FATS AND OILS INDUSTRY

The Grain Marketing Office (GMO) of the Department of Industry, Trade and Commerce (ITC) plays the leading role in the government's grains and oilseeds market development and related industrial development initiatives. Co-ordination with other departments is effected through the Grains Group.

A mandate for export trade promotion and other activities bearing directly on Canada's foreign and inter-provincial commerce was one of the earliest and most important assumed by the federal government.

Initially, and continuing until the early 1960's, the Department of Trade and Commerce carried the responsibility while also gradually increasing its role in the promotion and support of industrial development in Canada.

When the decision was made to greatly increase the level of government assistance for the development of new and existing industries and firms, a Department of Industry was established to direct and manage the emergent policies and programs. Subsequently, the two departments have been merged into Industry, Trade and Commerce.

Within the present department, responsibility for the development and maintenance of markets is, therefore, combined with a similar one for the maintenance and improvement of the supply base, including a constant upgrading of product through increased "value-added" processing. Grains and oilseeds constitute one of the industries to which this responsibility applies.

Grain marketing, handling and transportation in Canada are performed in a unique system which includes both the government and a private trade. The government's presence is most conspicuous in the form of the Canadian Wheat Board, a producers' marketing board and a Crown Agency, which effectively controls export and interprovincial trade in wheat, oats and barley produced in western Canada.

Other government departments and agencies also play vital parts in the maintenance and improvement of the industry. The major burden of scientific research into grains and oilseeds production, including varietal development, falls upon Agriculture Canada, as does the regulation of grading and handling through the Canadian Grain Commission. Transportation, one of the most important links in the marketing chain, particularly the long rail haul from the prairies to tidewater, is a major concern of the Ministry of Transport and the Canadian Transportation Commission.

In 1969-70, the deep and widespread commitment of the government to the grains and oilseeds industry was brought into sharp focus by the creation of the Special Group on Grains. One of its first, major accomplishments was the establishment of a comprehensive program of market development, known as the GOMI (Grains and Oilseeds Marketing Incentives) Program.

Chaired by the Hon. Otto E. Lang, Minister Responsible for the Canadian Wheat Board, the group (popularly known as the Grains Group) comprises advisors from Agriculture, Transport and ITC. Its prime role is policy formulation and problem solving. Under the general guidance of the Group, ITC is the government's functional authority in matters related to grains and oilseeds marketing.

In keeping with the terms of this relationship, ITC's Grains Program Office was expanded in 1971 to form the GMO and assigned the task of establishing an appropriate program under which to administer the market development funds which had been authorized. Concurrently, a Market Development Division was established. This division continues to administer the GOMI Program.

The government's market development activity supports the "extra step" into product innovation and imaginative marketing.

Whether manifested in new products and technologies, in ventures into new markets or new techniques for maintaining established ones, the primary purpose is a sustained expansion of sales of grains, oilseeds and their derivatives. Both domestic and international markets are eligible targets.

Essentially, it is the implementation of a philosophy of risk-sharing with the entrepreneur who is prepared and qualified to attempt the extra step across new frontiers of development. "Normal" risks are considered the everyday business of the principal and are not shared. It is when he wished to pursue opportunities beyond his ordinary financial or managerial capability that market development assistance can provide encouragement and support. Even the identification of such opportunities may be an eligible activity.

Since market development assistance and support is intended only for "incremental" risks associated with innovative market thrusts, it is conversely true that ordinary, short-term sales promotions generally are not eligible.

Broadly speaking, three categories of activities are considered to fall within the sphere of market development in this context. They are: identification and penetration of new or improved commercial products and; establishing in Canada new capabilities needed to carry out development projects.

Emphasis is on initiatives originated and pursued in the private sector (defined as virtually any capable entity outside the federal government) because it is a basic tenet that the government itself does not engage in development projects. Subject always to the proviso that programs and projects undertaken must have a demonstrated potential for furthering the market development objective, universities and other institutions, including industry and trade associations may qualify as applicants for assistance. The basic criterion is the ability of the proponent to follow through, capitalize on the results of the project and translate them into an economically sound venture.

While adhering to the principle of supporting rather than engaging directly in projects, the government also applies considerable money and professional expertise to direct assistance with the conception, organization, execution and follow up of individual projects and programs. Here, its extensive industry, trade and marketing information and research resources provide a depth of service beyond the scope of the majority of individual project proponents.

Since inception of the GOMI program, 87 project sponsors have requested support. Some 57 have been approved, 25 failed to meet the criteria and were rejected, another 5 are in the process of evaluation. Brief analysis shows that 34 approved projects were in the "market identification/development" category, 16 in "product and process development" and 7 in "Canadian capability".

Out of the total funding of \$5.7 million, the 16 product and process development projects received nearly \$3.0 million. This is of special significance to the oilseeds sector since many of these are concerned with the extraction, improvement and utilization of the components of oilseeds, especially rapeseed.

Although funded separately, the POS Pilot Plant project also originated in the Grains Group and GMO and has been followed to completion by the latter. This facility is unique in its financial and corporate structure. The federal government contributed 90 per cent of its \$5.0 million construction cost, but has ensured that control of its board of directors rests with the industrial representatives on it. The versatility and range of its pilot-scale processing equipment, including a solvent extractor, is also unique and should help to ensure Canada's pre-eminent position as a high-quality supplier of rapeseed and related products.

Strong support for the rapeseed industry is also reflected in the Rapeseed Utilization Assistance Program (RUAP). Annual funding of \$300,000 is administered by the Rapeseed Association of Canada, under a contract with GMO, in support of mutually-agreed projects to improve the quality and commercial acceptability of rapeseed and its products.

Involvement in other related organizations and groups such as the Rapeseed Association and the Canadian Committee on Fats and Oils assists GMO in keeping abreast of current industry problems to ensure the relevance of its responses and initiatives.

In summary, these programs and activities reflect the emphasis of federal assistance to the Canadian Fats and Oils industry in the area of market development. It is planned that they form the basic focus of such assistance in the immediate future.

CHAPTER 2

WORLD PRODUCTION AND TRADE IN FATS AND OILS

World Fats and Oils: Calculated Production

World production of fats and oils in 1977 is forecast at 48.2 million metric tons, which is 540,000 metric tons below the 1976 production (Table 1).

Over the past decade, world oil production has trended upwards by approximately 1.2 million metric tons annually but the 1977 forecast is 730,000 metric tons short of the projected 1965-75 trend. This should result in a stock drawdown, mostly in the producer-exporting countries. Supplies, however, should be adequate to provide for increasing world requirements.

In the palm and lauric oil sector, 1977 production of palm oil is expected to be up to 17 per cent over the 1976 production; world coconut oil output of 2.9 million metric tons in 1977 is 200,000 metric tons below the 1976 production. The anticipated decline is based on reduced rainfall in key growing areas of the Philippines.

World industrial oil output is expected to decline in 1977 because of the reduced production of linseed oil.

The world production of animal fats has shown very little change since 1971. The same situation prevails in regard to marine oils.

In order to reach projected trend levels for 1978, i.e. without considering any need for stock replacement, total world production of all fats and oils would have to increase by 2.5 million metric tons or 5 per cent compared to an average annual increase of 1.2 million metric tons in the past.

World Production of Major Oilseed Meals

The meal production statistics for 1976 are estimates only and the 1977 figure is a forecast; these indicate a decline in world production of oilseed meals of 3.6 million metric tons (Table 2). All of this cutback is attributed to soybean meal because of a short supply of beans.

The production of fishmeal and solubles is expected to increase by 100,000 metric tons.

The below-trend level of production of protein in the current season (1977) and a continuing high level of demand are likely to bring stocks down close to minimum working levels by the year end. Unusually large increases in output will be required in 1978 to replenish supplies.

In order to reach the projected trend levels for 1978, without considering need for stock replenishment, world increase by about 2.9 million metric tons or 9 per cent. This increase compares with average annual increases in the past of about 1.1 million metric tons.

World Net Exports of Oilseeds, Oils and Fats

In 1976/77 world net export availabilities of oils and fats, including the oil equivalent of oilseeds, will decline as compared to 1975/76 (Table 3). Assuming only a small increase in world market demand for oils and fats, there will be a reduction in net export availabilities over actual net exports of 1.06 million metric tons compared to 1975/76.

In the food sector the world market stocks could decline by 730,000 metric tons, or to about 1 million metric tons, the smallest since 1973/74.

In the non-food sector, 1976/77 world net export availabilities are expected to decline 94,000 metric tons and their excess over actual net exports to only 71,000 metric tons compared to a normal 125,000 metric tons.

World Net Exports and Availabilities of Oilmeals

The excess of world market availabilities over actual estimated net exports in 1976/77 (Table 4) could decline to only 790,000 metric tons including the meal equivalent of oilseeds (from 4.8 million metric tons in 1975/76). This level of stocks approaches the 536,000 metric tons in 1972/73 which resulted in an export embargo.

TABLE 1

WORLD OIL AND FAT: CALCULATED PRODUCTION^{1/}

(Thousands of Metric Tons)

EDIBLE VEGETABLE OILS	1971	1972	1973	1974	1975	1976	1977
Cottonseed	2,628	2,851	2,998	3,151	3,294	2,808	3,039
Peanut	3,376	3,500	2,906	3,064	3,057	3,557	3,635
Soybean	6,266	6,751	7,413	9,381	8,313	10,125	9,205
Sunflower	3,612	3,637	3,414	4,509	3,980	3,600	3,772
Rapeseed	2,515	2,599	2,479	2,410	2,609	2,677	2,512
Sesame	721	656	615	636	628	690	651
Safflower	226	300	239	210	210	303	200
Olive ^{2/}	1,437	1,559	1,450	1,548	1,419	1,770	1,528
Corn	280	287	303	303	278	293	300
TOTAL	21,061	22,140	21,817	25,212	23,788	25,823	24,842
<u>PALM OILS^{3/}</u>							
Coconut	2,454	2,824	2,433	2,236	2,868	3,077	2,880
Palm Kernel	462	454	435	490	512	543	578
Palm	1,925	2,131	2,238	2,627	2,942	3,151	3,565
Babassu	72	107	105	105	105	96	100
TOTAL	4,913	5,516	5,211	5,458	6,427	6,867	7,123
<u>INDUSTRIAL OILS</u>							
Linseed	1,236	860	720	750	714	820	754
Castor	349	322	416	501	382	302	350
Oiticica	20	14	1	11	11	15	14
Tung	141	139	87	114	91	109	96
Olive Residue ^{4/}	131	132	139	165	130	154	140
TOTAL	1,877	1,467	1,363	1,541	1,328	1,400	1,354
<u>ANIMAL FATS</u>							
Butter (Fat Content)	4,122	4,398	4,540	4,509	4,544	4,568	4,567
Lard	4,421	4,369	4,268	4,534	4,424	4,250	4,400
Tallow, Grease	4,568	4,526	4,453	4,955	4,599	4,800	4,850
TOTAL	13,111	13,293	13,261	13,998	13,567	13,618	13,817
<u>MARINE OILS</u>							
Whale	70	65	55	40	45	45	40
Sperm Whale	135	125	125	120	115	115	110
Fish (Including Liver)	1,173	934	809	996	972	860	900
TOTAL	1,378	1,124	989	1,156	1,132	1,020	1,050
GRAND TOTAL	42,340	43,540	42,641	47,365	46,242	48,728	48,186

TABLE 1 (Cont'd)FOOTNOTES TOWORLD OIL AND FAT: CALCULATED PRODUCTION^{1/}

- 1/ Years indicated are those in which most of given oil was produced.
- 2/ Excludes olive residue oil.
- 3/ Estimated on basis of exports and other information.
- 4/ Includes quantities of refined oil for edible purposes.

SOURCE: United States Department of Agriculture, FOP 22/76.

TABLE 2

WORLD PRODUCTION OF MAJOR OILSEED MEALS^{1/}
(Thousands of Metric Tons)

<u>OILSEED MEALS</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u> ^{2/}	<u>1977</u> ^{3/}
Soybean Meal	33,300	42,140	37,340	45,520	41,350
Cottonseed Meal	8,580	9,030	9,460	8,080	8,730
Peanut Meal	3,490	3,680	3,670	4,210	4,370
Sunflower Meal	3,470	4,280	3,750	3,520	3,670
Rapeseed Meal	3,860	3,740	4,090	4,160	3,940
Copra Meal	1,330	1,220	1,570	1,680	1,580
Palm Kernel Meal	470	530	550	580	620
Linseed Meal	<u>1,330</u>	<u>1,390</u>	<u>1,320</u>	<u>1,520</u>	<u>1,400</u>
TOTAL	<u>55,830</u>	<u>66,010</u>	<u>61,750</u>	<u>69,270</u>	<u>65,660</u>
Fish Meal & Solubles	<u>3,670</u>	<u>4,180</u>	<u>3,940</u>	<u>4,100</u>	<u>4,200</u>
WORLD TOTAL	<u>59,500</u>	<u>70,190</u>	<u>65,690</u>	<u>73,370</u>	<u>69,860</u>

1/ Calculated from assumed crushings and extraction rates applied to that portion of each crop available for crushing and/or export and not actual crushings.

2/ Estimated.

3/ Forecast.

SOURCE: United States Department of Agriculture, FOP 21/76.

TABLE 3

WORLD NET EXPORTS OF OILSEEDS, OILS AND FATS^{1/}
(Thousands of Metric Tons)

	A. Net Exports Availabilities				B. Actual Net Exports			
<u>Primarily for Food</u>	<u>1973/74</u>	<u>1974/75</u>	<u>1975/76^{2/}</u>	<u>1976/77^{3/}</u>	<u>1973/74</u>	<u>1974/75</u>	<u>1975/76^{2/}</u>	<u>1976/77^{3/}</u>
	(Crop Year - October/September)				(Crop Year - October/September)			
Soybeans and oil	4430	4080	5580	4888	3864	3381	4739	4600
Cottonseed and oil	390	460	380	456	372	436	360	430
Groundnuts and oil (6)	575	565	740	727	535	513	630	680
Sunflowerseed & oil	1030	1100	770	655	862	728	692	630
Rapeseed and oil	740	730	970	832	708	651	741	780
Sesameseed, as oil	125	110	110	113	117	97	99	105
Olive oil (4)...	270	260	440	480	224	203	226	280
Total, Liquid veget.	7560	7305	8990	8151	6682	6009	7487	7505
Copra & coconut oil	975	1340	1840	1804	947	1292	1827	1780
Palm kernels & oil	365	400	410	425	357	391	403	420
Palm oil	1335	1780	2000	2300	1304	1740	1961	2250
Total, palm . . .	2675	3520	4250	4529	2608	3423	4191	4450
Butter, fat content	680	640	750	845	664	610	626	650
Lard	440	460	410	494	415	432	397	450
Total, edible animal	1120	1100	1160	1339	1079	1042	1023	1100
Fish oils	560	550	550	535	551	507	530	510
Whale oil (production)	38	31	27	25	38	31	27	25
Total, edible marine	598	581	577	560	589	538	557	535
Total for food	<u>11,953</u>	<u>12,506</u>	<u>14,977</u>	<u>14,579</u>	<u>10,958</u>	<u>11,012</u>	<u>13,258</u>	<u>13,590</u>
Excess of A. over B.	995	1494	1719	989				
<u>Primarily non-food</u>								
Linseed and oil	315	280	365	346	293	253	312	320
Castor beans and oil	270	220	250	201	241	147	233	195
Tung oil	50	50	55	46	48	45	54	45
Tallow & Greases (5)	1570	1540	1570	1558	1506	1527	1535	1520
Sperm oil (production)	100	90	85	80	100	90	85	80
Total, non-food	2305	2180	2325	2231	2188	2062	2219	2160
GRAND TOTAL	<u>14,258</u>	<u>14,686</u>	<u>17,302</u>	<u>16,810</u>	<u>13,146</u>	<u>13,074</u>	<u>15,477</u>	<u>15,750</u>
Excess of A. over B.	1112	1612	1825	1060				

TABLE 3 (Cont'd)FOOTNOTES TO WORLD NET EXPORTS OF OILSEEDS, OILS AND FATS^{1/}

1/ October/September, oil basis.

2/ Preliminary.

3/ Estimated.

4/ Including edible and inedible residue oil

5/ Including edible tallow.

6/ Excluding groundnut exports for other than crush purposes.

SOURCE: "Oil World", Hamburg, December 17, 1976.

TABLE 4

WORLD NET EXPORTS AND AVAILABILITIES OF OILMEALS
(Thousands of Metric Tons)

	A. Net Export Availabilities				B. Actual Net Exports			
Actual Weight	1973/74	1974/75	1975/76 ^{1/}	1976/77 ^{2/}	1973/74	1974/75	1975/76 ^{1/}	1976/77 ^{2/}
	(Crop Year - October/September)				(Crop Year - October/September)			
<u>Oilseed Meals</u>								
Soybean	22,900	22,300	28,770	24,838	20,382	19,240	24,624	24,400
Cottonseed	1,210	1,190	1,080	1,222	1,114	1,105	1,048	1,170
Groundnut	1,430	1,340	1,940	1,787	1,341	1,247	1,888	1,730
Sunflower	505	470	520	614	476	441	486	580
Rapeseed	920	760	1,110	959	867	642	779	880
Sesame	170	160	180	190	162	151	168	180
Copra	775	1,025	1,340	1,374	759	992	1,318	1,350
Palm Kernel	500	520	545	575	482	503	527	555
Linseed	685	640	730	730	617	577	629	720
Unspecified (c)	715	740	785	806	693	718	763	785
Total	29,810	29,145	37,000	33,095	26,893	25,616	32,230	32,350
Fish Meal	1,565	2,150	1,880	1,985	1,409	2,076	1,852	1,940
Grand Total	31,375	31,295	38,880	35,080	28,302	27,692	34,082	34,290
Excess of A. over B.	3,073	3,603	4,798	790				
<u>Raw Protein Basis (b)</u>								
<u>Oilseed Meals</u>								
Soybean	10,305	9,923	12,946	11,177	9,172	8,562	11,081	10,980
Cottonseed	460	452	410	464	423	420	398	445
Groundnut	686	643	931	858	644	599	906	830
Sunflowerseed	187	174	192	227	176	163	180	215
Rapeseed	313	258	377	326	295	218	265	299
Sesame	68	64	72	76	65	60	67	72
Copra	163	215	281	289	159	208	277	283
Palm Kernel	85	88	93	98	82	86	90	94
Linseed	226	211	241	241	204	190	208	238
Unspecified (c)	265	274	290	298	256	266	282	290
Total	12,758	12,302	15,833	14,054	11,476	10,772	13,754	13,746
Fish Meal	1,017	1,397	1,222	1,290	916	1,349	1,204	1,261
Grand Total	13,775	13,699	17,055	15,344	12,392	12,121	14,958	15,007
Excess of A. over B.	1,383	1,578	2,097	337				

TABLE 4 (Cont'd)

NOTE: (a) Of countries being net exporters of the respective meal and seed combined.

(b) Average raw protein content of oil cake/expeller/meal. Oilseeds are converted into crude oil and oilmeals, and the latter into raw protein basis, at the following percentage rates:

	<u>Crude Oil</u>	<u>Oilmeal</u>	<u>Raw Protein Content of Meal</u>
Soybeans	18(c)	79.5(a)	45(f)
Cottonseed	17.5	59(b)	38
Groundnuts, shelled	44.5	55	48
Sunflowerseed	42(e)	53(b,e)	37
Rapeseed	38.5(d)	59(d)	34
Sesameseed	47	52	40
Copra	63.5	36	21
Palm Kernels	46.5	52.5	17
Linseed	34	63	33
Castor Beans	45	-	-
Other Oilseeds	33	60	37
Fish Meal	-	-	65

(a) Mostly including hull meal. (b) Partly including hulls.

(c) Up to 30 September 1973: 17.5%. (d) Up to 31 December 1972: 40% for the oil and 57% in the case of meal. (e) Up to 31 December 1971: 44% for the oil and 55% for the meal. (f) Oct./Sept. 74/75: 44.5%

(c) Except castor bean.

1/ Preliminary.

2/ Estimated.

SOURCE: "Oil World", Hamburg, December 17, 1976.

CHAPTER 3

CANADIAN PRODUCTION AND TRADE IN FATS AND OILS

Canadian Oilseeds: Acreage, Yield, Production

The Canadian fats and oils industry includes oilseed production (rapeseed, flaxseed, soybeans and sunflowerseed), crushing of these oilseeds, and processing of the resulting oils and meals. In addition, a variety of oils are imported, along with soybean meal, to help fill domestic demand.

Rapeseed continues to be the leading oilseed produced in Canada, with production in recent years averaging 1.3 million tonnes (Table 5). Approximately 750,000 tonnes are exported each year, either as food aid or as commercial sales. There are now six rapeseed crushing plants in Canada, with a combined daily crushing capacity of 3,550 tonnes. The Canadian domestic requirement for rapeseed oil is approximately 100,000 tonnes per year, and for meal 210,000 tonnes. Therefore, if the crushers were to operate at full capacity, Canada would have available for export approximately 325,000 tonnes of oil and 400,000 tonnes of meal. At a more normal 65% capacity utilization rate, exportable supplies would be 185,000 tonnes of rapeseed oil and 200,000 tonnes of rapeseed meal. The industry is actively seeking export markets for oil and meal.

Rapeseed acreage dropped drastically in 1976 compared to the four previous years because of lower returns per acre as compared to cereal grains. However, yield per acre increased significantly in 1976 due to ideal conditions. For 1977, it is expected that rapeseed acreage will approach 3 million acres because of relatively attractive market conditions compared to cereal grains.

Flaxseed production has stabilized in recent years at approximately 380,000 tonnes. Domestic crushing has declined due to the increased use of linseed substitutes. The crop is now grown primarily for export as seed. There are only two flax processors remaining in Canada, one located in Toronto and the other in Medicine Hat, Alberta.

Flaxseed acreage remained relatively constant in the years 1972 to 1975 but declined in 1976 because of anticipated higher returns from cereal grains (Table 5). In 1977 it is expected that flaxseed acreage will return to more normal levels. Yield per acre in 1976 increased over former years because of ideal growing conditions.

Soybean production is concentrated in southwestern Ontario and averages 325,000 tonnes annually. An equivalent volume of soybeans are imported each year from the U.S. for processing into oil and meal. In addition, at least 200,000 tonnes of soybean meal is imported, along with 20,000 to 30,000 tonnes of soybean oil. There are three soybean processing plants, all in Ontario, with a fourth planned for the Windsor area, to process Canadian and U.S. beans.

Considerable progress is being made in developing new varieties which will extend the area of soybean production in Canada. However, commercial production of important quantities of soybeans from these varieties is still several years away.

Sunflowerseed production is rather minor in Canada and is restricted to the Prairie region. Production has averaged 30,000 tonnes in recent years. There is a good demand for sunflowerseed oil.

Mustardseed is grown mainly in the Prairie region. It is largely an export crop, with very little processing done in Canada. Mustardseed is grown mainly under contract. Annual production of mustardseed is slightly more than 100 million pounds. The main export markets are the EEC, Japan and the U.S.

Canadian Production of Fats & Oils

Canadian production of edible vegetable oils increased by 12 per cent in 1976 as compared to 1975 because of a significant increase in rapeseed oil production (Table 7). It is interesting to note that rapeseed oil production in 1976 outstripped the production of soybean by 38,042 metric tons. This was due mainly to two factors, 1) increased rapeseed crushing capacity and 2) increased domestic and international demand for low erucic acid rapeseed oil.

In contrast to edible vegetable oils, production of animal fats decreased by 12,641 metric tons in 1976 as compared to 1975 because of the 11 per cent reduction in butter production. The production of edible tallow and lard continued their downward trend from 1972.

The decrease in edible marine oil production continues, reflecting declining fish stocks and generally lower activity in the fishing industry.

In the inedible oil sector no statistics are published for linseed oil production because of the secrecy requirements of the Statistics Act. The overall increase was because of a 52 per cent increase in inedible marine oils and an increase of approximately 9 per cent in inedible tallow.

Canadian Imports of Fats & Oils

Canadian imports of edible vegetable oils have been increasing steadily since 1972 (Table 8). These oils include palm coconut, corn, palm kernel, groundnut, cottonseed and olive. In some cases, these imported oils are blended with domestic oils such as rapeseed oil: in other cases, they are refined and sold as identity-preserved oils, such as corn oil and olive oil.

Imports of animal fats and oils in 1976 increased by 2,575 metric tons over 1976 entirely because of lard importations. Imports of marine oils have been steadily declining since 1972.

In the inedible oil sector imports continue their decline which began in 1973.

Canadian Exports of Fats & Oils

Exports of edible vegetable oils, either as oil or in seed form, increased by 19 per cent in 1976 over 1975 (Table 9). Rapeseed and rapeseed oil accounted for the increase. Soybean and soybean oil exports continue their decline due to the loss of the preferential tariff in the U.K.

Animal fats and marine oil exports increased by about 27 per cent in 1976 over 1975.

In the inedible fats and oil sector 1976 exports increased slightly over 1975 but continued their overall declining since 1972.

Canadian Crashings of Vegetable Oilseeds & Production of Oil
and Meal by Crop Year

New crushing capacity for rapeseed came on stream in 1975-76 therefore rapeseed crushing increased by about 22 per cent (71,188 metric tons), resulting in an increase in the production of rapeseed oil and meal. (Table 10).

Soybean crushing also increased in 1975-76 because of a favourable price relationship with rapeseed in the first quarter of the crop year.

The crush of sunflowerseed increased significantly in 1975-76 but still well below the crush of 1971-72 through 1973-74.

TABLE 5

CANADIAN OILSEEDS: ACREAGE, YIELD, PRODUCTION

	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>Estimated</u> <u>1976</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>Estimated</u> <u>1976</u>
	(Thousands of Acres)					(Yield per Acre, Bushels)				
Flaxseed	1,321	1,450	1,450	1,400	875	13.3	13.4	9.5	12.5	13.4
Rapeseed	3,270	3,150	3,160	4,020	1,950	17.5	16.9	16.2	17.9	20.7
Soybeans	405	470	415	390	370	34.0	(Pounds) 31.0	24.8	34.6	28.9
Mustardseed	180	335	350	163	128	842	782	743	678	901.6
Sunflowerseed	217	129	21	62	50	783	705	867	1,065	1,060

	<u>Production</u> (Thousands of Bushels)					<u>Oil Equivalent</u> (Metric Tons)				
Flaxseed	17,617	19,400	13,800	17,500	11,700	158,759	174,634	124,091	157,361	105,209
Rapeseed	57,300	53,200	51,300	76,000	41,000	520,275	482,627	465,390	654,097	371,960
Soybeans	13,770	14,570	10,290	13,478	9,250	66,225	70,307	49,569	64,926	44,551
	(Metric Tons)					(Metric Tons)				
Mustardseed	68,720	118,842	117,935	50,122	52,300	-	-	-	-	-
Sunflowerseed	77,111	41,232	8,255	29,937	24,000		16,329	3,302	11,975	9,600

Oil Conversion Factors: Flaxseed35.4%

Rapeseed40.0%

Soybeans17.7%

Sunflowerseed40.0%

MustardseedOil Content Varies with Variety

TABLE 6CANADIAN OILSEED PRODUCTION BY PROVINCE

	<u>A R E A</u>			<u>YIELD PER ACRE</u>			<u>P R O D U C T I O N</u>		
	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
<u>FLAXSEED</u>	(Thousands of acres)			(Bushels)			(Thousands of Bushels)		
Manitoba	700	750	550	9.4	11.2	11.5	6,600	8,400	6,300
Saskatchewan	550	450	225	8.5	13.1	16.9	4,700	5,900	3,800
Alberta	200	200	100	12.5	16.0	16.0	2,500	3,200	1,600
<hr/>									
<u>RAPESEED</u>				(Bushels)			(Thousands of Bushels)		
Manitoba	500	750	250	17.0	16.7	18.0	8,500	12,500	4,500
Saskatchewan	1,450	1,800	850	16.0	18.3	22.8	23,200	33,000	19,400
Alberta	1,150	1,700	850	16.3	17.9	19.4	18,700	30,500	16,500
British Columbia	60	70	35	15.0	15.7	17.1	900	1,100	600
<hr/>									
<u>SOYBEANS</u>				(Bushels)			(Thousands of Bushels)		
Ontario	415	390	370	24.8	34.6	25.0	10,290	13,478	9,250
<hr/>									
<u>SUNFLOWERSEED</u>				(Pounds)			(Metric Tons)		
Manitoba	21	62	50	867	1,065	1,060	8,255	29,945	24,047
<hr/>									
<u>MUSTARD SEED</u>				(Pounds)			(Metric Tons)		
Manitoba	40	23	18	750	630	800	13,608	6,579	6,352
Saskatchewan	200	76	75	750	658	893	68,039	22,686	30,399
Alberta	110	64	35	727	719	971	36,287	20,871	15,426

SOURCE: Statistics Canada, Catalogue No. 22-002.

TABLE 7CANADIAN PRODUCTION OF FATS AND OILS

(Metric Tons)

	<u>1 9 7 2</u>	<u>1 9 7 3</u>	<u>1 9 7 4</u>	<u>1 9 7 5</u>	<u>1 9 7 6</u>
<u>PRIMARILY EDIBLE^{1/}</u>					
<u>VEGETABLE OILS</u>					
Soybean Oil ^{2/}	103,352	91,421	122,417	113,106	117,328
Rapeseed Oil ^{3/}	115,212	144,580	112,873	124,773	155,370
Sunflowerseed Oil ^{4/}	<u>13,033</u>	<u>13,233</u>	<u>7,913</u>	<u>3,172</u>	<u>x^{11/}</u>
TOTAL ^{5/}	<u>231,597</u>	<u>249,234</u>	<u>243,203</u>	<u>241,051</u>	<u>272,698</u>
<u>ANIMAL FATS</u>					
Edible Tallow	19,860	18,476	16,883	17,000	16,438
Lard	55,117	50,415	50,216	43,240	42,795
Butter (as butter oil)	<u>110,355</u>	<u>80,096</u>	<u>88,258</u>	<u>106,425</u>	<u>94,791</u>
TOTAL	<u>185,332</u>	<u>148,987</u>	<u>155,357</u>	<u>166,665</u>	<u>154,024</u>
<u>MARINE OILS</u>					
Herring	12,834	11,732	7,122	5,044	3,553
Seal	1,505	-	-	-	-
Whale ^{7/}	2,739	283	-	-	-
Other ^{8/}	<u>-</u>	<u>-</u>	<u>428</u>	<u>44</u>	<u>975</u>
TOTAL ^{9/}	<u>17,078</u>	<u>12,015</u>	<u>7,550</u>	<u>5,088</u>	<u>4,528</u>
<u>TOTAL EDIBLE OIL</u>					
<u>PRODUCTION</u>	<u>434,007</u>	<u>410,236</u>	<u>406,110</u>	<u>412,804</u>	<u>431,250</u>
<u>PRIMARILY INEDIBLE</u>					
Linseed Oil ^{10/}	27,912	13,572	x ^{11/}	x ^{11/}	x ^{11/}
Inedible Tallow	183,693	186,003	182,727	182,491	199,183
Marine Oils ^{12/}	<u>3,439</u>	<u>925</u>	<u>2,869</u>	<u>4,471</u>	<u>9,238</u>
<u>TOTAL INEDIBLE OILS</u>					
<u>PRODUCTION</u>	<u>215,044</u>	<u>200,500</u>	<u>185,596</u>	<u>186,962</u>	<u>208,421</u>
<u>TOTAL EDIBLE AND INEDIBLE</u>					
<u>FATS AND OILS PRODUCTION</u>					
(Excluding Linseed Oil					
in 1974, 1975 & 1976	<u>649,051</u>	<u>610,736</u>	<u>591,706</u>	<u>599,766</u>	<u>539,671</u>
& Sunflowerseed Oil					
in 1976)					

TABLE 7 (Cont'd)

- 1/ Production data for corn oil and cocoa butter are confidential and have not been included.
- 2/ Soybean oil output of Canadian crushing mills.
- 3/ Rapeseed oil output of Canadian crushing mills. The Grain Research Laboratory of the Canadian Grain Commission has reported the average oil content of carlot survey samples of rapeseed as follows:
- | | |
|---------|-----------------------------|
| 1971/72 | 43.9% (dry matter basis) |
| 1972/73 | 40.2% (8.5% moisture basis) |
| 1973/74 | 39.9% (8.5% moisture basis) |
| 1974/75 | 40.9% (8.5% moisture basis) |
| 1975/76 | 41.4% (8.5% moisture basis) |
- 4/ Sunflowerseed oil output of Canadian crushing mills.
- 5/ Includes only crude vegetable oils produced in Canadian mills.
- 6/ Butter oil represents the oil equivalent of creamery butter, farm butter and whey butter production, using 81% as the conversion factor.
- 7/ Whale oil production includes small amounts of other unspecified marine oils.
- 8/ Other oil production includes seal oils.
- 9/ Small quantities of salmon oil (West Coast) and of redfish oil (East Coast) of edible grade cannot be identified statistically and are included under "Marine Oils" in the inedible category below.
- 10/ Linseed oil output of Canadian crushing plants. The Grain Research Laboratory of the Canadian Grain Commission has reported the average oil content (dry matter basis) of carlot survey samples of flaxseed as follows:
- | | |
|---------|-------|
| 1971/72 | 42.2% |
| 1972/73 | 42.4% |
| 1973/74 | 42.4% |
| 1974/75 | 43.1% |
| 1975/76 | 43.1% |
- 11/ Confidential - to meet secrecy requirements of Statistics Act.
- 12/ Includes liver oils, groundfish oil, salmon oil and small amounts of unspecified oils.

SOURCE: Statistics Canada, Catalogue Nos. 22-006, 24-002, 32-002, 32-020.

TABLE 8

CANADIAN IMPORTS OF FATS AND OILS

(Metric Tons)

<u>PRIMARILY EDIBLE</u>					
	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
<u>Vegetable Oils</u>					
Soybeans (Oil Equiv.)	54,440	41,027	69,169	68,227	70,371
Soybean Oil	17,012	18,971	33,614	20,881	31,205
Cottonseed Oil	10,191	8,402	11,333	11,289	5,200
Corn Oil	8,179	6,604	10,358	10,172	16,418
Peanut Oil	7,399	7,382	5,519	6,848	6,734
Coconut Oil	32,295	21,299	21,956	25,816	29,647
Palm Oil	30,861	19,580	16,199	41,283	55,001
Palm Kernel Oil	5,749	5,944	4,376	5,093	10,351
Olive Oil	2,903	2,088	2,408	1,987	5,096
Cocoa Butter	6,300	6,595	5,378	4,362	5,008
Sunflowerseed Oil	1,926	77	186	170	271
Vegetable Oils & Fats	1,764	4,504	5,973	2,965	3,156
Vegetable Cooking Fats & Packaged Salad Oils	545	1,031	1,461	693	144
Margarine & Shortening Oils	5,133	1,448	11,983	15,546	16,322
<u>Total1/</u>	<u>184,702</u>	<u>144,956</u>	<u>199,918</u>	<u>215,332</u>	<u>254,924</u>
<u>Animal Fats</u>					
Lard	9,783	7,160	17,680	12,118	19,246
Butter2/	3,247	23,013	19,754	4,565	12
<u>Total</u>	<u>13,031</u>	<u>30,173</u>	<u>37,435</u>	<u>16,683</u>	<u>19,258</u>
<u>Marine Oils</u>					
Fish & Marine Oil	1,651	1,239	849	879	299
<u>Total</u>	<u>1,651</u>	<u>1,239</u>	<u>849</u>	<u>879</u>	<u>299</u>
<u>TOTAL EDIBLE OILS & FATS</u>	<u>199,385</u>	<u>176,369</u>	<u>238,202</u>	<u>232,894</u>	<u>274,481</u>
<u>PRIMARILY INEDIBLE</u>					
Castor Oil	2,170	2,788	1,850	1,909	1,313
Tung Oil	1,024	1,242	425	692	734
Inedible Tallow3/	8,406	2,779	3,509	1,668	832
Animal Oil & Fats	1,148	475	808	487	652
Animal Grease4/	1,148	2,517	2,612	4,154	1,700
<u>TOTAL INEDIBLE OILS & FATS</u>	<u>13,897</u>	<u>9,802</u>	<u>9,205</u>	<u>8,910</u>	<u>5,231</u>
<u>TOTAL EDIBLE & INEDIBLE FATS & OILS IMPORTS</u>	<u>213,283</u>	<u>186,172</u>	<u>247,408</u>	<u>241,804</u>	<u>281,025</u>

TABLE 8 (Cont'd)

FOOTNOTES TO
CANADIAN IMPORTS OF FATS AND OILS

- 1/ Vegetable oil total includes the oil equivalent of the imported soybeans. This is justified because the soybeans are crushed in Canada for oil and meal production.
- 2/ Butter imports have been converted to oil equivalent, using the factor of 81%.
- 3/ This class includes both edible and inedible tallow. The proportions are not known.
- 4/ This category includes Animal Grease, NES and Wool Grease and Lanolin.

SOURCE: Statistics Canada, Catalogue No. 65-007

TABLE 9

CANADIAN EXPORTS OF FATS AND OILS

(Metric Tons)

PRIMARYLY EDIBLE					
	1972	1973	1974	1975	1976
<u>Vegetable Oils</u>					
Soybeans (Oil Equiv.)	7,334	4,771	5,034	1,541	4,363
Soybean Oil	31,305	3,360	8,148	2,074	--
Rapeseed (Oil Equiv.)	430,917	477,474	246,394	270,479	309,949
Rapeseed Oil	--	34,805	27,669	19,811	42,501
Sunflowerseed (Oil Equiv.)	9,707	12,459	8,467	3,186	3,800
Margarine & Shortening	236	147	352	268	706
Vegetable Oil & Fats	9,104	13,252	763	944	6,974
Total ^{1/}	488,604	546,269	296,828	298,303	368,293
<u>Animal Fats</u>					
Butter (Oil Equiv.) ^{2/}	8	2	3	23	2,861
Total	8	2	3	23	2,861
<u>Marine Oils</u>					
Herring Oil	3,422	2,833	5,524	2,277	5,315
Whale Oil	2,197	1,259	--	--	5
Total	5,620	4,093	5,524	2,277	5,320
<u>TOTAL EDIBLE FATS & OILS</u> (Including Oil Equiv. of Oilseeds)	494,293	550,362	302,356	300,603	376,474
PRIMARYLY INEDIBLE					
Flaxseed (Oil Equiv.)	210,469	153,355	124,267	86,709	87,297
Linseed Oil	16,123	6,080	592	3,562	5,108
Inedible Tallow ^{3/}	104,130	81,926	98,740	97,871	109,884
Marine Oils ^{4/}	1,672	2,683	2,338	2,615	4,789
Animal Fats and Oils	3,293	5,116	2,718	1,463	3,282
<u>TOTAL INEDIBLE FATS & OILS</u>	335,688	249,162	228,656	192,210	210,370
<u>TOTAL EDIBLE & INEDIBLE FATS AND OILS</u>	829,921	799,525	531,012	492,823	586,844

TABLE 9 (Cont'd)FOOTNOTES TOCANADIAN EXPORTS OF FATS AND OILS

- 1/ The margarine portion cannot be separated, consequently it was not converted to fat equivalent. Oil equivalent of oilseeds are included in all totals. It is justified to include the oil equivalents of exported oilseeds into the total of fats and oil exports, since it represents a form of oil export and does not involve a duplication of data. Starting in 1973 rapeseed oil exports are reported separately and are no longer included under "Vegetable Oils and Fats".
- 2/ Butter exports have been converted to oil equivalent, using the factor of 81%.
- 3/ This class includes both edible and inedible tallow. The proportions are not known.
- 4/ Marine oil exports listed under "Inedible Oils" include sun-rotted cod liver oil, a non-specified group of fish and marine oil, and fish liver and visceral oils. While most of these oils can be assumed to be of an inedible grade, a small quantity of edible oil may have been included.

SOURCE: Statistics Canada, Catalogue No. 65-007.

TABLE 10

CANADIAN CRUSHINGS OF VEGETABLE OILSEEDS AND
PRODUCTION OF OIL AND MEAL BY CROP YEAR
(Metric Tons)

<u>CRUSHINGS</u>	<u>1971/72</u>	<u>1972/73</u>	<u>1973/74</u>	<u>1974/75</u>	<u>1975/76</u>
Flaxseed	78,744	66,890	19,346	x ¹ / _—	x ¹ / _—
Rapeseed	272,158	353,178	334,414	275,973	347,161
Soybeans	634,128	612,552	642,310	635,110	722,988
Sunflowerseed	<u>31,298</u>	<u>31,717</u>	<u>28,212</u>	<u>7,134</u>	<u>20,029</u>
Total	<u>1,016,328</u>	<u>1,064,337</u>	<u>1,024,282</u>	<u>918,217</u>	<u>1,090,178</u>
<u>OIL PRODUCTION</u>					
Flaxseed	26,762	22,762	6,601	x ¹ / _—	x ¹ / _—
Rapeseed	106,141	133,966	125,631	108,483	141,698
Soybeans	109,316	99,125	109,169	108,344	122,694
Sunflowerseed	<u>13,154</u>	<u>13,009</u>	<u>11,234</u>	<u>2,671</u>	<u>8,328</u>
Total	<u>255,375</u>	<u>268,862</u>	<u>252,635</u>	<u>219,498</u>	<u>272,720</u>
<u>MEAL PRODUCTION</u>					
Flaxseed	49,895	42,037	11,932	x ¹ / _—	x ¹ / _—
Rapeseed	162,841	204,169	193,932	157,763	197,376
Soybeans	493,967	482,973	503,368	499,183	569,467
Sunflowerseed	<u>11,793</u>	<u>11,811</u>	<u>10,558</u>	<u>2,553</u>	<u>7,266</u>
Total	<u>718,497</u>	<u>740,990</u>	<u>719,790</u>	<u>659,499</u>	<u>774,109</u>

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

SOURCE: Statistics Canada, Catalogue No. 22-006.

CHAPTER 4

THE CANADIAN RAPESEED SITUATION

Canadian Rapeseed Production

Rapeseed production has declined since the record crop of 1971-72 of 95 million bushels. There are various reasons given for the decline such as increased competition from cereal grains, weakening of prices and a projected decrease in demand accompanied by an anticipated surplus of soy and other protein meals.

Reduced plantings of rapeseed and U.S. soy associated with an increased demand for protein and oil has reduced Canadian and U.S. inventories sharply. The drought in Europe in 1976 made serious inroads on European production. A marked downward trend in cereal prices has led to increased planting intentions for 1977. It is anticipated that Canadian production of rapeseed in 1977 will be close to 3,000,000 acres.

Canadian Exports of Rapeseed

Rapeseed exports increased in 1976 by about 15% over 1975 but were still below the exports in 1972 and 1973 (Table 12). Japan is by far Canada's largest market accounting for over 80% of our rapeseed exports. Exports to both India and Bangladesh were reduced because these countries are now taking rapeseed oil under CIDA's bilateral food aid program rather than taking rapeseed as in the past.

Canadian Exports of Rapeseed Oil

New crushing capacity came on stream in late 1975 and larger quantities of oil became available for international markets. Another new plant came on stream in early 1977, making total rapeseed crushing capacity 3,550 tonnes per day.

Due to increased world demand for rapeseed and oil, exports of both products are anticipated to increase in 1977 over 1976 levels.

Canadian Exports of Rapeseed Oilcake & Meal

Exports of rapeseed meal increased dramatically in 1976 over 1975 and this trend is expected to continue as new varieties of rapeseed with low glucosinolates, lower fibre and higher protein content come into commercial production in Canada (Table 14).

Canadian Rapeseed Prices

Rapeseed is traded on the Winnipeg Commodity Exchange (Table 17). Prices were fairly stable from 1971-72 through 1972-73 until they began their upward swing in January, 1974, reaching their peak of \$9.55½ per bushel in October 1974 and then trended downwards through to July, 1976.

TABLE 11CANADIAN SUPPLY AND DISPOSITION OF RAPESEEDRAPESEED OIL AND RAPESEED MEAL

(Crop Year)

<u>RAPESEED</u>	<u>1971/72</u>	<u>1972/73</u>	<u>1973/74</u>	<u>1974/75</u>	<u>1975/76</u>
	(Thousands of Bushels)				
Stocks, Starting	11,029	43,139	20,678	12,386	17,633
Production	95,000	57,300	53,200	51,300	77,100
Exports	42,603	54,059	39,183	26,146	30,116
Domestic Crashings	12,050	15,572	14,745	12,168	15,307

RAPESEED OIL

(Metric Tons)

Exports	-	24,983	34,488	19,240	32,633
Domestic Production	106,141	133,966	125,631	108,483	141,698

RAPESEED MEAL

(Metric Tons)

Exports	-	19,452	47,580	10,672	27,984
Domestic Production	162,841	204,169	193,932	157,763	197,376

SOURCE: Statistics Canada, Catalogue No. 22-006.

TABLE 12

CANADIAN EXPORTS OF RAPESEED

(Metric Tons)

DESTINATION	1972	1973	1974	1975	1976
Algeria	1,950	--	--	--	--
Australia	10,995	20,613	14,739	--	--
Bangladesh	--	81,048 ^{2/}	18,012 ^{3/}	47,688 ^{4/}	25,662 ^{8/}
Belgium-Luxembourg	1,516	2,092	358	508	--
Brazil	--	--	12	--	--
Denmark	--	4,536	--	--	--
Finland	--	--	--	--	103
France	143,369	17,118	--	--	--
Germany, West	28,075	87,970	23,418	5,651	15,058
Hungary	^{1/}	--	--	--	--
India	51,242	51,302 ^{5/}	4,521 ^{6/}	14,142 ^{7/}	--
Italy	67,997	86,121	896	2,008	2,956
Japan	588,648	710,987	493,947	579,385	687,076
Korea, South	--	24,474	--	--	7,268
Lebanon	3,789	--	--	--	--
Mexico	4	23,502	38,731	--	--
Morocco	15,201	--	--	--	--
Netherlands	86,058	61,895	20,680	18,426	16,682
Norway	3,242	--	--	--	--
Pakistan	52,051	--	--	--	--
Peru	--	--	2	--	--
Romania	--	--	1	--	--
Spain	61	1,004	--	919	4
Sweden	20	13	^{1/}	56	211
Switzerland	--	--	--	3,953	--
Taiwan	--	18,024	--	--	--
United Kingdom	18,562	3,048	999	3,324	13,358
United States	191	2	104	123	6,491
Venezuela	--	--	--	9	--
Total	<u>1,077,791</u>	<u>1,193,666</u>	<u>615,975</u>	<u>676,199</u>	<u>774,873</u>

^{1/} Less than one metric ton.^{2/} CIDA reports 27,140 metric tons shipped under bilateral food aid in the crop year 1972/73.^{3/} CIDA reports 30,162 metric tons shipped under bilateral food aid in the crop year 1973/74.^{4/} CIDA reports 9,432 metric tons shipped under bilateral food aid in the crop year 1974/75.^{5/} CIDA reports 51,302 metric tons shipped under bilateral food aid in the crop year 1972/73.^{6/} CIDA reports 4,521 metric tons shipped under bilateral food aid in the crop year 1973/74.^{7/} CIDA reports 23,582 metric tons shipped under bilateral food aid in the crop year 1974/75.^{8/} CIDA reports 16,787 metric tons shipped under bilateral food aid in the crop year 1975/76

TABLE 13CANADIAN EXPORTS OF RAPESEED OIL

(Metric Tons)

<u>DESTINATION</u>	<u>1972^{1/}</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Australia		395	538	122	-
Bangladesh		295 ^{2/}	-	-	5,542 ^{5/}
Chile		11,159	-	-	-
Egypt		-	-	-	745
France		1	-	-	-
Hong Kong		2,304	-	590	2,069
India		5,050	13,237 ^{3/}	9,438 ^{4/}	23,248 ^{5/}
Japan		13,695	3,381	3,019	8,481
Labanon		-	-	-	290
Netherlands		13	-	3,202	-
United Kingdom		1,176	1,240	2,476	-
United States		711	8,268	963	2,124
Zambia		-	1,002	-	-
TOTAL		<u>34,805</u>	<u>27,669</u>	<u>19,811</u>	<u>42,501</u>
TOTAL VALUE (\$'000)		<u>10,223</u>	<u>14,133</u>	<u>15,683</u>	<u>23,081</u>

1/ Not Published prior to 1973.2/ CIDA reports 4,493 metric tons shipped under bilateral food aid in the crop year 1972/73.3/ CIDA reports 13,694 metric tons shipped under bilateral food aid in the crop year 1973/74.4/ CIDA reports 7,364 metric tons shipped under bilateral food aid in the crop year 1974/75.5/ CIDA reports 17,455 metric tons shipped under bilateral food aid in the crop year 1975/76.SOURCE: Statistics Canada, Catalogue No. 65-004.

TABLE 14

CANADIAN EXPORTS OF RAPESEED OILCAKE AND MEAL
(Metric Tons)

<u>DESTINATION</u>	<u>1972</u> ^{1/}	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Barbados		9	269	-	-
Chile		5,499	-	-	-
Cuba		20	-	-	-
Germany, West		1,451	16	1,965	4,686
Jamaica		-	3	-	-
Japan		1	-	-	121
Korea, South		7,597	-	-	-
Mexico		3,039	5,811	-	-
Netherlands		6,702	10,738	5,756	26,941
Philippines		3,710	609	-	
United Kingdom		11,616	7,620	12,392	16,127
United States		<u>1,608</u>	<u>5,840</u>	<u>552</u>	<u>3,696</u>
Total		<u>41,257</u>	<u>30,911</u>	<u>20,666</u>	<u>51,573</u>
Total Value (\$'000)		<u>6,198</u>	<u>3,218</u>	<u>2,115</u>	<u>6,089</u>

1/ Not published prior to 1973.

SOURCE: Statistics Canada, Catalogue No. 65-004.

TABLE 15

QUALITY DATA FOR WESTERN CANADIAN RAPESEED,
SURVEY SAMPLES OF 1974 AND 1975 CROPS

	<u>1975 SURVEY</u>				<u>1976 SURVEY</u>			
<u>WESTERN CANADA</u>	<u>Oil^{1/}/ Content</u>	<u>Erucic Acid Content</u>	<u>Protein^{2/}/ Content</u>	<u>No. of Samples</u>	<u>Oil^{1/}/ Content</u>	<u>Erucic Acid Content</u>	<u>Protein^{2/}/ Content</u>	<u>No. of Samples</u>
No. 1 CRS	41.3	3.2	36.6	445	41.3	2.3	36.3	421
No. 2 CRS	40.6	1.6	40.4	46	40.6	0.9	39.3	22
All Grades	41.3	3.1	36.9	493	41.3	2.3	36.4	443
<u>ALL GRADES BY PROVINCE</u>								
Manitoba	39.7	1.6	39.9	80	41.8	2.1	38.6	61
Saskatchewan	41.6	2.5	36.9	229	41.9	1.5	36.6	205
Alberta	41.5	4.4	35.7	184	40.5	3.2	35.4	177

34

1/ Oil content of seed is reported on an 8.5% moisture basis.

2/ Protein content is reported on the oil-free meal and an 8.5% moisture basis.

SOURCE: Canadian Grain Commission, Crop Bulletins Nos. 129 and 133.

TABLE 16

SUMMERFALLOW AND STUBBLE CULTIVATION OF RAPESEED

<u>Seeded Area</u>	<u>Summer- fallow</u>	<u>Stubble</u>	<u>Total</u>
	('000 Acres)		
1972	2,525	745	3,270
1973	2,410	740	3,150
1974	2,346	754	3,100
1975	3,170	1,080	4,250
1976	1,531	419	1,950
<hr/>			
<u>Distribution</u>	(Per Cent)		
1972	77	23	100
1973	77	23	100
1974	76	24	100
1975	75	25	100
1976	79	21	100
<hr/>			
<u>Average Yield Per Seeded Acre</u>	(Bushels)		
1972	18.3	14.8	17.5
1973	17.9	13.5	16.9
1974	17.2	13.4	16.3
1975	19.0	14.7	17.9
1976	22.2	15.3	20.7
<hr/>			
<u>Production</u>	(Million Bushels)		
1972	46.27	11.03	57.30
1973	43.22	9.98	53.20
1974	40.30	10.10	50.40
1975	60.10	15.90	76.00
1976	34.00	6.40	40.40

SOURCE: Statistics Canada, Catalogue No. 22-002

TABLE 17

CANADIAN RAPESEED PRICES ^{1/}
(Crop Year)

<u>MONTH</u>	<u>1971/72</u>	<u>1972/73</u>	<u>1973/74</u>	<u>1974/75</u>	<u>1975/76</u>
	(Cents and Eighths per Bushel)				
August	273/7	244/7	649/7	821/2	666/2
September	248/2	253/3	536/4	851/4	595/3
October	255/4	256/1	493/7	955/5	533/1
November	250/2	260/5	482/5	902	495/3
December	238/3	295/5	566/6	812/3	441
January	228	325/6	655/1	731/7	451/6
February	231/4	374/4	706/1	639/3	467/7
March	247/2	361	677/7	620/2	465/4
April	269/5	376/2	608/7	643/3	455/7
May	248	399/1	702/1	568/5	479/3
June	234/7	537/7	738/6	545/3	540/5
July	<u>239/3</u>	<u>682/4</u>	<u>796</u>	<u>587/4</u>	<u>580/4</u>
Yearly Average	<u>247/1</u>	<u>364</u>	<u>634/4</u>	<u>723/2</u>	<u>514/3</u>

1/ Winnipeg Grain Exchange No. 1 Canadian Rapeseed, basis in store Thunder Bay.

SOURCE: Statistics Canada, Catalogue No. 22-006.

CHAPTER 5

THE CANADIAN SOYBEAN SITUATION

Canadian Supply and Disposition

Soybean production in Canada has remained fairly stable for the past few years because of the limited production area forcing soybeans to compete with other cash crops that are produced in the same southwestern Ontario area (Table 18).

The Japanese are interested in specific Canadian soybean varieties as food products. This type of interest is encouraging Canadian soybean growers to examine their international markets with respect to widening them and to reduce their requirement to compete with U.S. soy.

Domestic crushings have remained relatively stable over the past five years.

Canadian Imports of Soybeans & Soybean Oil

Canadian imports of soybeans, almost all from the United States, continue to be about equal to Canadian production (Table 19). Soybean oil continues to be the dominant oil of choice used by Canadian manufacturers of margarine, salad oil and shortening. This is due to its favourable price relationship with rapeseed oil as well as the traditional buying habits of the manufacturer and consumer. Soy oil continues to make inroads in the industrial area once almost wholly a domain of linseed oil, e.g. paint dryer.

Imports of soybean oil all from the United States, increased by 10.3 thousand metric tons in 1976 over 1975 probably due to the favourable price relationship which existed for about half of 1976 with rapeseed oil.

Imports of Soybean Meal

Soybean meal continues to dominate the protein meal market in Canada and the volume of imports varies according to Canadian production, price relationship with rapeseed meal and the level of livestock and poultry feeding in Canada (Table 21).

Canadian Exports of Soybeans

The United Kingdom was Canada's largest market for soybeans but with their entry into the EEC resulting in the loss of the Commonwealth preferential tariff, exports of Canadian soybeans have dropped off drastically since 1972 (Table 22). Singapore, Japan and Hong Kong have become our major markets. They import Canadian soybeans for direct human consumption as opposed to beans for use as oil and meal.

Canadian Exports of Soybean Oil and Meal

With the loss of the United Kingdom market, Canada's exports of soybean oil are nil (Table 23).

Although exports of soybean meal showed a slight increase in 1976 over 1975 this appears to be only a minor aberration in the downward trend.

Canadian Soybean Prices

Canadian prices of soybeans are closely tied to the Chicago commodity market (Table 24).

TABLE 18

CANADIAN SUPPLY AND DISPOSITION OF SOYBEANS,
SOYBEAN OIL AND SOYBEAN MEAL
 (Crop Year)

<u>SOYBEANS</u>	<u>1971/72</u>	<u>1972/73</u>	<u>1973/74</u>	<u>1974/75</u>	<u>1975/76</u>
	(Thousands of Bushels)				
Production	10,276	13,770	14,570	11,040	13,478
Imports	14,774	10,973	12,506	12,650	13,633
Exports	1,366	1,062	1,061	349	819
Domestic Crushings	23,314	22,507	23,601	23,336	26,565
<u>SOYBEAN OIL</u>	(Metric Tons)				
Imports	19,519	16,459	33,395	19,557	30,810
Exports	46,128	12,547	4,942	5,587	1,043
Domestic Production	109,316	99,125	109,169	108,344	122,694
<u>SOYBEAN MEAL</u>	(Metric Tons)				
Imports	207,649	219,872	232,974	271,149	343,814
Exports	123,208	118,066	94,087	83,527	69,335
Domestic Production	493,967	482,973	503,368	499,183	569,467

SOURCE: Statistics Canada, Catalogue No. 22-006.

TABLE 19CANADIAN IMPORTS OF SOYBEAN AND SOYBEAN OILSOYBEANS

(Metric Tons)

<u>COUNTRY OF ORIGIN</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Germany, West	-	-	2	1	-
Hong Kong	4	12	<u>1/</u>	3	17
Japan	-	2	2	4	-
Peoples Republic of China	5	20	20	13	-
United Kingdom	-	<u>1/</u>	-	-	-
United States	<u>308,470</u>	<u>231,749</u>	<u>390,756</u>	<u>385,444</u>	<u>397,560</u>
Total	<u>340,043</u>	<u>231,784</u>	<u>390,781</u>	<u>385,465</u>	<u>397,577</u>
Total Value (\$'000)	<u>39,108</u>	<u>50,360</u>	<u>90,505</u>	<u>86,210</u>	<u>81,136</u>

SOYBEAN OIL

(Metric Tons)

<u>COUNTRY OF ORIGIN</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
France	<u>1/</u>	-	<u>1/</u>	1	-
United States	<u>17,012</u>	<u>18,971</u>	<u>33,614</u>	<u>20,881</u>	<u>31,205</u>
Total	<u>17,012</u>	<u>18,971</u>	<u>33,614</u>	<u>20,882</u>	<u>31,205</u>
Total Value (\$'000)	<u>4,708</u>	<u>8,264</u>	<u>24,829</u>	<u>14,394</u>	<u>14,223</u>

1/ Less than one metric ton.SOURCE: Statistics Canada, Catalogue No. 65-007.

TABLE 20

IMPORTS OF SOYBEAN OIL BY PROVINCE

	<u>1 9 7 2</u>		<u>1 9 7 3</u>		<u>1 9 7 4</u>		<u>1 9 7 5</u>		<u>1 9 7 6</u>	
	Metric Tons	'000 of \$	Metric Tons	'000 of \$	Metric Tons	'000 of \$	Metric Tons	'000 of \$	Metric Tons	'000 of \$
Nova Scotia	--	--	39	17	--	--	1	<u>1/</u>	10	6
New Brunswick	2,314	674	948	393	1,366	1,033	1,614	1,267	1,036	545
Quebec	149	50	873	446	5,897	3,871	1,490	822	2,056	788
Ontario	12,062	3,254	11,775	5,114	16,913	13,143	11,681	8,196	17,767	8,396
Manitoba	69	14	2,338	993	4,458	3,184	2,752	1,572	4,646	1,865
Saskatchewan	--	--	--	--	95	73	250	155	225	100
Alberta	--	--	162	72	970	599	343	236	1,931	734
British Columbia	<u>2,415</u>	<u>714</u>	<u>2,830</u>	<u>1,225</u>	<u>3,912</u>	<u>2,922</u>	<u>2,747</u>	<u>2,142</u>	<u>3,532</u>	<u>1,783</u>
Total	<u>17,011</u>	<u>4,706</u>	<u>18,969</u>	<u>8,260</u>	<u>33,613</u>	<u>24,825</u>	<u>20,881</u>	<u>14,394</u>	<u>31,205</u>	<u>14,222</u>

1/ Less than \$1,000.

SOURCE: Statistics Canada, Unpublished Data.

TABLE 21

IMPORTS OF SOYBEAN MEAL BY PROVINCE

	<u>1 9 7 2</u>		<u>1 9 7 3</u>		<u>1 9 7 4</u>		<u>1 9 7 5</u>		<u>1 9 7 6</u>	
	<u>Metric</u>	<u>'000</u>	<u>Metric</u>	<u>'000</u>	<u>Metric</u>	<u>'000</u>	<u>Metric</u>	<u>'000</u>	<u>Metric</u>	<u>'000</u>
	<u>Tons</u>	<u>of \$</u>	<u>Tons</u>	<u>of \$</u>	<u>Tons</u>	<u>of \$</u>	<u>Tons</u>	<u>of \$</u>	<u>Tons</u>	<u>of \$</u>
Newfoundland	--	--	--	--	--	--	129	18	--	--
Nova Scotia	1,536	185	3,084	477	133	29	3,288	521	19	3
New Brunswick	--	--	36	4	72	13	129	18	5,569	1,369
Quebec	50,512	6,232	36,719	5,312	65,673	10,399	91,146	20,062	118,447	25,368
Ontario	54,839	7,247	47,879	14,048	57,704	10,897	49,312	8,574	57,881	12,891
Manitoba	47,689	5,188	46,432	11,245	77,965	14,627	63,070	9,975	69,789	12,250
Saskatchewan	6,029	662	16,335	4,383	19,672	3,975	17,808	3,134	16,740	3,227
Alberta	28,414	3,067	21,794	5,644	27,025	5,108	37,904	6,273	42,521	7,120
B.C.	<u>33,122</u>	<u>3,743</u>	<u>19,060</u>	<u>5,016</u>	<u>29,192</u>	<u>5,865</u>	<u>31,554</u>	<u>5,622</u>	<u>37,896</u>	<u>7,810</u>
Total	<u>222,143</u>	<u>26,254</u>	<u>191,341</u>	<u>46,129</u>	<u>277,438</u>	<u>50,853</u>	<u>294,343</u>	<u>54,209</u>	<u>348,865</u>	<u>70,042</u>

SOURCE: Statistics Canada, Unpublished Data

TABLE 22CANADIAN EXPORTS OF SOYBEANS

(Metric Tons)

<u>DESTINATION</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Belgium-Luxembourg	-	-	2,000	-	-
Bulgaria	-	137	-	-	-
France	-	-	63	490	73
Germany, West	-	1	561	225	10
Hong Kong	-	18	957	2,192	5,111
Jamaica	2	2	3	4	-
Japan	-	5,103	3,830	3,041	6,825
Malaysia	-	-	-	-	209
Netherlands	162	145	18	-	-
Philippines	-	-	-	-	125
Singapore	-	-	-	1,020	9,667
Spain	-	-	-	213	-
Sweden	676	839	1,356	-	-
Switzerland	72	72	91	-	-
United Kingdom	40,532	20,358	4,162	30	80
United States	24	274	22	46	351
U.S.S.R.	5	-	-	-	-
Yugoslavia	-	-	-	160	-
Other Countries ^{1/}	-	-	-	-	2,199
Total	<u>41,478</u>	<u>26,955</u>	<u>13,066</u>	<u>8,710</u>	<u>24,653</u>
Total Value (\$'000)	<u>5,665</u>	<u>6,151</u>	<u>3,451</u>	<u>2,812</u>	<u>6,100</u>

^{1/} To protect confidentiality under the Statistics Act.

SOURCE: Statistics Canada, Catalogue No. 65-004.

TABLE 23CANADIAN EXPORTS OF SOYBEAN OIL AND MEAL

(Metric Tons)

SOYBEAN OIL

<u>DESTINATION</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Bahamas	8	4	-	-	-
Germany, West	-	-	-	14	-
Jamaica	-	-	-	4	-
Leeward-Windward Islands	-	-	1	1	-
United Kingdom	31,296	3,310	7,778	1,965	-
United States	<u>1/</u>	<u>45</u>	<u>368</u>	<u>92</u>	<u>-</u>
Total	<u>31,304</u>	<u>3,359</u>	<u>8,148</u>	<u>2,076</u>	<u>-</u>
Total Value (\$'000)	<u>8,480</u>	<u>1,233</u>	<u>5,663</u>	<u>1,391</u>	<u>-</u>

1/ Less than one metric ton.SOYBEAN MEAL

<u>DESTINATION</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Belgium-Luxembourg	-	6,679	-	-	-
Germany, West	-	-	-	-	28
Guyana	6	-	-	-	3
Ireland	-	-	3,789	-	2,039
Trinidad-Tobago	-	-	-	1	-
United Kingdom	86,675	94,906	101,984	57,269	59,653
United States	<u>1,872</u>	<u>9,923</u>	<u>9,420</u>	<u>1,723</u>	<u>987</u>
Total	<u>88,554</u>	<u>111,509</u>	<u>115,195</u>	<u>58,993</u>	<u>62,711</u>
Total Value (\$'000)	<u>9,405</u>	<u>18,851</u>	<u>17,547</u>	<u>9,435</u>	<u>11,272</u>

SOURCE: Statistics Canada, Catalogue No. 65-004.

TABLE 24

CANADIAN SOYBEAN PRICES^{1/}
(Crop Year)

<u>M O N T H</u>	<u>1971/72</u>	<u>1972/73</u>	<u>1973/74</u>	<u>1974/75</u>	<u>1975/76</u>
 (Cents and Eighths per Bushel)				
August	326/1	340/7	1040	716/2	596/5
September	304/7	325/6	605	726/6	545/5
October	308/3	310/5	557	811/4	477/3
November	299/2	342/2	553/6	723/6	435
December	299/6	391/7	583/7	678/2	420/6
January	297/2	428	606/2	590/6	436/3
February	306/6	567/6	644/1	506/2	441/7
March	325/7	617/5	610/2	504/2	438/1
April	338/2	646/4	534/2	527/3	437/6
May	335/5	882/4	517/1	481/8	481/2
June	330/1	1095/7	504/6	488/2	582/4
July	<u>334/3</u>	<u>929</u>	<u>642/1</u>	<u>542/7</u>	<u>611/4</u>
Yearly Average	<u>316/7</u>	<u>573/2</u>	<u>616/4</u>	<u>608/2</u>	<u>492/1</u>

1/ Buying prices, carlots, f.o.b. Chatham, No. 2 and better.

SOURCE: Statistics Canada, Catalogue No. 22-006.

CHAPTER 6

THE CANADIAN SUNFLOWER SITUATION

Canadian Sunflower Production

In the crop years 1975-76 and 1976-77 Manitoba was the only province to produce sunflowers (Table 25). Intensive research is now underway for the development of new varieties suitable for growing in Saskatchewan and Alberta. Test plots of new varieties were grown successfully in 1976-77 in Saskatchewan and Alberta, and it is expected that in 1977-78 commercial production will extend into these two provinces.

The domestic and export markets could absorb much larger quantities of sunflowerseed.

Canadian Exports & Imports of Sunflowerseed & Oil

Exports of sunflowerseed increased in 1976 over 1975 but were still well below exports in 1972 and 1973 (Table 26).

Imports of sunflowerseed oil have also declined from a high of 1,925 metric tons in 1972 to 271 metric tons in 1976 (Table 27).

TABLE 25CANADIAN SUNFLOWERSEED: ACREAGE, YIELD AND PRODUCTION

(Crop Year)

	<u>1972/73</u>	<u>1973/74</u>	<u>1974/75</u>	<u>1975/76</u>	<u>1976/77</u>
	(Thousands of Acres)				
Manitoba	190.0	125.0	30.0	62.0	50.0
Saskatchewan	23.0	2.5	-	-	-
Alberta	4.0	1.5	-	-	-
Canada, Total	217.0	129.0	30.0	62.0	50.0
	(Yield Per Acre, Pounds)				
Manitoba	800	700	867	1,065	1,060
Saskatchewan	652	800	-	-	-
Alberta	750	933	-	-	-
Canada, Total	783	705	867	1,065	1,060
	(Production - Metric Tons)				
Manitoba	68,946	39,689	8,255	29,945	24,047
Saskatchewan	6,804	907	-	-	-
Alberta	1,360	635	-	-	-
Canada, Total	77,111	41,232	8,255	29,937	24,047

SOURCE: Statistics Canada, Catalogue No. 22-002

TABLE 26CANADIAN EXPORTS OF SUNFLOWERSEED

(Metric Tons)

<u>DESTINATION</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Australia	-	<u>1/</u>	-	-	17
Bangladesh	-	<u>1/</u>	2	-	2
Czechoslovakia	-	-	6,877	-	1,604
Denmark	-	-	-	-	18
France	2,499	20,357	-	-	-
Germany, West	4,339	69	7,244	3,825	3,590
Italy	-	8,255	-	-	-
Japan	5,558	-	-	-	-
Korea, South	-	23	-	-	-
Netherlands	10,221	887	5,703	-	3,001
New Zealand	2	2	<u>1/</u>	2	<u>1/</u>
Portugal	-	-	36	2,701	-
Spain	-	161	-	526	-
Sweden	46	37	<u>1/</u>	2	4
United Kingdom	45	22	31	34	25
United States	1,526	1,326	1,250	874	1,238
U.S.S.R.	-	-	<u>1/</u>	-	-
Total	<u>24,238</u>	<u>31,143</u>	<u>21,169</u>	<u>7,965</u>	<u>9,501</u>
Total Value (\$'000)	<u>3,660</u>	<u>6,143</u>	<u>7,334</u>	<u>2,623</u>	<u>3,258</u>

1/ Less than one metric ton.Source: Statistics Canada, Catalogue No. 65-004.

TABLE 27

CANADIAN IMPORTS OF SUNFLOWERSEED OIL
(Metric Tons)

<u>COUNTRY OF ORIGIN</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Austria	7	1	3	5	--
France	--	<u>1/</u>	2	1	--
Germany, West	<u>1/</u>	--	--	--	--
Netherlands	219	--	--	--	--
United States	1,698	74	178	160	271
U.S.S.R.	<u>--</u>	<u>--</u>	<u>1</u>	<u>4</u>	<u>--</u>
TOTAL	<u>1,925</u>	<u>77</u>	<u>186</u>	<u>170</u>	<u>271</u>
TOTAL VALUE (\$'000)	<u>617</u>	<u>27</u>	<u>181</u>	<u>158</u>	<u>147</u>

1/ Less than one metric ton.

SOURCE: Statistics Canada, Catalogue No. 65-007

TABLE 28

IMPORTS OF SUNFLOWERSEED OIL BY PROVINCE

	<u>1 9 7 2</u>		<u>1 9 7 3</u>		<u>1 9 7 4</u>		<u>1 9 7 5</u>		<u>1 9 7 6</u>	
	Metric	'000	Metric	'000	Metric	'000	Metric	'000	Metric	'000
	<u>Tons</u>	<u>\$</u>	<u>Tons</u>	<u>\$</u>	<u>Tons</u>	<u>\$</u>	<u>Tons</u>	<u>\$</u>	<u>Tons</u>	<u>\$</u>
Nova Scotia	-	-	-	-	-	-	-	-	1	<u>2/</u>
Quebec	5	3	2	1	7	4	8	9	2	<u>2/</u>
Ontario	1,920	616	74	25	178	175	50	43	38	22
Alberta	-	-	-	-	-	-	111	105	213	115
British Columbia	-	-	-	-	<u>1/</u>	<u>1/</u>	<u>1/</u>	<u>2/</u>	16	6
Total	<u>1,925</u>	<u>619</u>	<u>77</u>	<u>26</u>	<u>185</u>	<u>179</u>	<u>170</u>	<u>157</u>	<u>270</u>	<u>143</u>

1/ Less than one metric ton.

2/ Less than \$1,000.

SOURCE: Statistics Canada, Unpublished Data.

CHAPTER 7THE CANADIAN MUSTARDSEED SITUATIONCanadian Mustardseed Production

Mustardseed production increased slightly in 1976-77 over 1975-76 because of an ideal growing season which resulted in a significant increase in yield per acre (Table 29). Average is expected to increase in 1977-78 as returns per acre to the producer should be considerably higher than for cereal grains.

Canadian Exports of Mustardseed

Most of the production of mustardseed in Canada is grown under contract to exporting companies who receive, clean and export the seed. The United States, the Netherlands, Japan and West Germany continue to be Canada's major markets for mustardseed (Table 30).

Canadian Imports of Ground Mustard

Very little mustardseed is processed in Canada, therefore, we must import to meet domestic requirements (Table 31).

TABLE 29CANADIAN MUSTARDSEED: ACREAGE, YIELD AND PRODUCTION

(Crop Year)

	<u>1972/73</u>	<u>1973/74</u>	<u>1974/75</u>	<u>1975/76</u>	<u>1976/77</u>
	(Thousands of Acres)				
Manitoba	15	40	40	23	18
Saskatchewan	140	225	200	76	75
Alberta	25	70	110	64	35
Canada, Total	180	335	350	163	128

(Yield, Pounds Per Acre)

Manitoba	833	800	750	630	800
Saskatchewan	821	800	750	658	893
Alberta	960	714	727	719	971
Canada, Total	842	782	743	678	902

(Metric Tons)

Manitoba	5,670	14,515	13,608	6,578	6,533
Saskatchewan	52,163	81,647	68,039	22,679	30,399
Alberta	10,886	22,679	36,287	20,865	15,246
Canada, Total	68,720	118,842	117,935	50,121	52,359

SOURCE: Statistics Canada, Catalogue No. 22-002.

TABLE 30

CANADIAN EXPORTS OF MUSTARDSEED

(Metric Tons)

<u>DESTINATION</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Argentina	99	-	-	-	-
Australia	-	-	65	-	-
Belgium-Luxembourg	9,818	8,035	6,292	114	574
Brazil	-	1/	93	-	-
Chile	-	-	4	-	-
Costa Rica	-	-	4	15	17
Czechoslovakia	-	-	-	108	35
El Salvador	-	4	-	-	-
France	5,382	-	129	290	181
Germany, West	8,652	11,459	2,165	3,483	2,613
Guatemala	-	-	1	-	-
Israel	-	25	-	3	-
Japan	6,264	6,149	7,565	9,058	7,517
Leeward-Windward Is.	1/	-	-	-	-
Mexico	151	177	281	272	108
Netherlands	10,839	10,791	18,048	11,057	9,114
New Zealand	-	-	1	-	-
Philippines	-	-	-	4	4
Spain	-	-	-	17	40
Sweden	-	-	54	54	54
Switzerland	549	684	94	430	-
United Kingdom	507	36	637	1,253	85
United States	43,278	34,052	33,460	31,659	38,526
U.S.S.R.	-	24	-	-	-
Venezuela	-	1	22	24	-
Total	<u>85,544</u>	<u>71,441</u>	<u>68,925</u>	<u>57,841</u>	<u>58,871</u>
Total Value (\$'000)	<u>9,458</u>	<u>13,812</u>	<u>21,171</u>	<u>22,939</u>	<u>20,946</u>

1/ Less than one metric ton.

SOURCE: Statistics Canada, Catalogue No. 65-004.

TABLE 31CANADIAN IMPORTS OF GROUND MUSTARD

(Metric Tons)

<u>COUNTRY OF ORIGIN</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
France	5	-	-	4	-
Germany, West	4	4	<u>1/</u>	2	-
Hong Kong	1	1	<u>1/</u>	<u>1/</u>	-
India	-	-	-	<u>1/</u>	-
Japan	-	1	<u>1/</u>	<u>1/</u>	-
People's Republic of China	-	-	3	-	-
Taiwan	-	-	-	2	-
United Kingdom	207	271	306	317	169
United States	63	41	56	65	99
Total	<u>280</u>	<u>319</u>	<u>368</u>	<u>393</u>	<u>269</u>
Total Value (\$'000)	<u>314</u>	<u>407</u>	<u>424</u>	<u>522</u>	<u>358</u>

1/ Less than one metric ton.SOURCE: Statistics Canada, Catalogue No. 65-007

CHAPTER 8OTHER OILSEED CAKE AND MEAL

1976 Canadian imports of miscellaneous oilseed cake and meal fell to the lowest level in the past four years (Table 32). Cottonseed meal imports were less than 10% of those in the previous two years and less than .5% of those of 1973. Oilseed cake and meal (NES) imports were down 25% from the previous year and down almost 50% from 1974 but were slightly above the 1973 import level and about five times above that of 1972.

1976 Canadian export of oilseed cakes and meals (NES) was of minor proportions at 1,150 metric tons as compared to the early 1970's (Table 33). However, the average price received was \$100 per metric ton as against the \$60 per metric ton received in 1972 and 1973 when large quantities were exported. The United States was the only buyer of these products in 1976.

TABLE 32CANADIAN IMPORTS OF MISCELLANEOUS OILSEED CAKE AND MEALS

(Metric Tons)

	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Cottonseed Meal	95	1,228	307	317	27
Oilseed Cake & Meal (NES)	<u>352</u>	<u>1,411</u>	<u>3,303</u>	<u>2,317</u>	<u>1,732</u>
TOTAL	<u>447</u>	<u>2,639</u>	<u>3,610</u>	<u>2,634</u>	<u>1,759</u>
TOTAL VALUE (\$'000)	<u>48</u>	<u>506</u>	<u>598</u>	<u>390</u>	<u>206</u>

SOURCE: Statistics Canada, Catalogue No. 65-007

TABLE 33CANADIAN EXPORTS OF OILSEED CAKES AND MEALS (NES)

(Metric Tons)

<u>DESTINATION</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Barbados	10	--	--	--	--
Belgium-Luxembourg	--	54	--	--	--
Bermuda	--	29	--	--	--
Cuba	7	--	--	--	--
France	--	1,887	--	--	--
Germany, West	--	36	--	--	--
Guyana	9	--	--	--	--
Italy	2	9,353	--	--	--
Japan	--	70,725	--	--	--
Korea, South	2	--	--	--	--
Netherlands-Antilles	3,397	9,334	--	--	--
Norway	--	18	--	--	--
Philippines	994	--	--	--	--
St. Pierre-Miquelon	--	--	--	4	--
United Kingdom	33,798	547	--	--	--
United States	<u>10,482</u>	<u>20,590</u>	--	--	<u>1,150</u>
TOTAL	<u>48,704</u>	<u>112,575</u>	--	<u>4</u>	<u>1,150</u>
TOTAL VALUE (\$'000)	<u>2,883</u>	<u>6,706</u>	--	<u>1</u>	<u>114</u>

SOURCE: Statistics Canada, Catalogue No. 65-004

leading supplier for the first time. Nicaragua was a first time supplier in the past five years while no supplies were received from Senegal and less than one metric ton from the United Kingdom. Costs per metric ton averaged \$630.00 in 1976 which is down from the \$870.00 paid in 1975 and the \$910.00 paid in 1974.

Canadian exports of other vegetable oils and fats (NES) jumped from less than 1000 metric tons in 1975 to almost 7000 metric tons in 1976 (Table 44). Saudi Arabia and West Germany became large buyers of these products. Colombia purchased from us for the first time in the past five years while the United States took over a 100% greater quantity in 1976 over 1975. Prices received averaged \$275.00 per metric ton which was down considerably from the \$540.00 received in 1975 and the \$670.00 in 1974.

TABLE 34

CANADIAN PRODUCTION OF DEODORIZED FATS AND OILS

(Metric Tons)

VEGETABLE OILS	1 9 7 5				1 9 7 6			
	Margarine Oil	Shortening Oil	Salad Oil	Total	Margarine Oil	Shortening Oil	Salad Oil	Total
Coconut	374	16,184	116	16,674	318	17,959	14	18,291
Corn	5,908	87	X	X	7,161	X	X	17,057
Cottonseed	249	4,326	380	4,955	2	2,668	729	3,399
Palm	6,241	25,554	1,476	33,271	6,877	30,353	1,140	38,370
Palm Kernel	10	5,039	91	5,140	X	X	-	6,154
Peanut	-	2,480	X	X	-	X	X	6,481
Rapeseed	33,709	22,043	38,816	94,568	31,844	21,451	47,228	100,523
Soybean	39,695	46,189	19,446	105,330	49,950	49,817	21,223	120,990
Sunflowerseed	45	241	X	X	X	X	X	11,163
Other Vegetable	567	296	168	1,031	X	X	-	1,488
TOTAL VEGETABLE OILS	86,798	122,439	80,314	289,551	97,064	132,712	94,140	323,916
MARINE OILS								
Herring	3,385	3,127	-	6,512	1,412	1,739	-	3,151
Seal	231	-	-	231	-	-	-	-
Whale	-	-	-	-	-	-	-	-
Other Marine	45	225	-	270	123	170	-	293
TOTAL MARINE OILS	3,661	3,352	-	7,013	1,535	1,909	-	3,444
ANIMAL FATS								
Lard	1,763	13,049	-	14,812	1,684	8,151	35	9,870
Oleo, All Types	4	669	-	673	-	1,297	-	1,297
Tallow, Edible	1,031	23,820	-	24,851	240	20,489	163	20,892
TOTAL ANIMAL FATS	2,798	37,538	-	40,336	1,924	29,937	198	32,059
TOTAL ALL FATS & OILS	93,257	163,329	80,314	336,900	100,523	164,558	94,338	359,419

TABLE 34 (Cont'd)

X Confidential to meet secrecy requirements of the Statistics Act.

SOURCE: Statistics Canada, Catalogue No. 32-006

TABLE 35

CANADIAN IMPORTS OF VEGETABLE OILS AND FATS (NES)
(Metric Tons)

<u>COUNTRY OF ORIGIN</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Austria	5	6	1	10	1
Belgium-Luxembourg	--	--	18	--	--
Brazil	9	35	18	14	212
Denmark	163	10	140	146	23
France	51	2	2	1	13
Germany, West	1	16	72	6	6
Greece	--	--	185	545	<u>1/</u>
Hong Kong	27	22	30	31	29
India	--	--	<u>1/</u>	<u>1/</u>	6
Ireland	--	--	--	--	--
Israel	1	6	--	--	--
Japan	22	28	59	33	47
Lebanon	2	1	---	<u>1/</u>	--
Netherlands	--	--	--	64	2
New Zealand	--	--	--	--	10
Malaysia	<u>1/</u>	--	--	--	--
Peoples' Republic of China	<u>1/</u>	1	5	7	14
Singapore	--	--	<u>1/</u>	--	2
Switzerland	26	1	1	3	3
Syria	--	--	1	--	--
Taiwan	--	--	<u>1/</u>	<u>1/</u>	<u>1/</u>
United Kingdom	18	289	1,994	572	331
United States	1,428	4,077	3,441	1,521	2,452
Yugoslavia	<u>1</u>	<u>1</u>	--	<u>6</u>	<u>1/</u>
TOTAL	<u>1,760</u>	<u>4,501</u>	<u>5,973</u>	<u>2,965</u>	<u>3,156</u>
TOTAL VALUE (\$'000)	<u>859</u>	<u>1,597</u>	<u>7,447</u>	<u>3,129</u>	<u>3,069</u>

1/ Less than one metric ton.

TABLE 36CANADIAN IMPORTS OF COCOA BUTTER

(Metric Tons)

<u>COUNTRY OF ORIGIN</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Australia	-	-	1,019	-	-
Brazil	250	351	1,677	426	875
Cuba	172	99	-	60	92
Dominican Republic	-	145	33	-	-
Ecuador	-	-	246	-	-
Germany, West	-	99	283	37	-
Ghana	2,631	1,198	1,016	-	-
Guinea	-	-	25	-	-
Ireland	34	42	-	-	-
Ivory Coast	762	99	977	236	299
Jamaica	132	50	44	-	-
Leeward-Windward Is.	-	-	30	-	-
Mexico	56	22	-	184	-
Netherlands	1,773	2,073	98	1,521	1,612
Nigeria	93	841	3,173	-	-
Singapore	-	-	-	-	26
Trinidad-Tobago	-	-	10	-	-
United Kingdom	153	1,274	211	1,283	1,409
United States	238	295	4,241	613	693
Total	<u>6,298</u>	<u>6,593</u>	<u>13,175</u>	<u>4,362</u>	<u>5,008</u>
Total Value (\$'000)	<u>7,807</u>	<u>12,925</u>	<u>20,048</u>	<u>14,378</u>	<u>16,714</u>

SOURCE: Statistics Canada, Catalogue No. 65-007.

TABLE 37

CANADIAN IMPORTS OF COCONUT OIL

(Metric Tons)

<u>COUNTRY OF ORIGIN</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Australia	-	661	993	2,218	<u>1/</u>
British Oceania	-	46	-	-	-
Fiji	318	-	1,721	<u>1/</u>	-
Finland	-	-	-	68	-
Germany, West	<u>1/</u>	-	1	1	-
Hong Kong	-	-	-	-	<u>1/</u>
Indonesia	-	-	-	-	173
Jamaica	6	<u>1/</u>	-	-	2
Leeward-Windward Is.	-	1	-	-	-
Malaysia	597	6,744	7,907	3,902	1,730
Netherlands	513	1,322	-	-	-
Norway	-	-	<u>1/</u>	-	-
Philippines	10,856	8,490	67	7,137	18,623
Puerto Rico	-	3	18	-	-
Singapore	42	4	5	-	-
Sri Lanka	14,248	1,728	8,096	10,540	8,190
United Kingdom	1,236	370	719	346	174
United States	<u>4,474</u>	<u>1,922</u>	<u>2,423</u>	<u>1,600</u>	<u>752</u>
Total	<u>32,294</u>	<u>21,297</u>	<u>21,956</u>	<u>25,816</u>	<u>29,647</u>
Total Value (\$'000)	<u>6,311</u>	<u>7,643</u>	<u>20,934</u>	<u>11,995</u>	<u>10,847</u>

1/ Less than one metric ton.SOURCE: Statistics Canada, Catalogue No. 65-007.

TABLE 38CANADIAN IMPORTS OF CORN OIL

(Metric Tons)

<u>COUNTRY OF ORIGIN</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
France	<u>1/</u>	-	<u>1/</u>	<u>1/</u>	-
Germany, West	-	309	-	-	-
United Kingdom	934	1,067	1,605	-	-
United States	<u>7,244</u>	<u>5,226</u>	<u>8,752</u>	<u>10,172</u>	<u>16,418</u>
Total	<u>8,178</u>	<u>6,603</u>	<u>10,358</u>	<u>10,173</u>	<u>16,418</u>
Total Value (\$'000)	<u>3,183</u>	<u>3,291</u>	<u>9,010</u>	<u>7,311</u>	<u>8,705</u>

1/ Less than one metric ton.SOURCE: Statistics Canada, Catalogue No. 65-007.

TABLE 39CANADIAN IMPORTS OF COTTONSEED OIL

(Metric Tons)

<u>COUNTRY OF ORIGIN</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
United Kingdom	-	-	<u>1/</u>	-	-
United States	<u>10,190</u>	<u>8,402</u>	<u>11,333</u>	<u>11,289</u>	<u>5,200</u>
Total	<u>10,190</u>	<u>8,402</u>	<u>11,334</u>	<u>11,289</u>	<u>5,200</u>
Total Value (\$'000)	<u>2,868</u>	<u>3,102</u>	<u>8,214</u>	<u>7,647</u>	<u>2,863</u>

1/ Less than one metric ton.SOURCE: Statistics Canada, Catalogue No. 65-007.

TABLE 40CANADIAN IMPORTS OF OLIVE OIL

(Metric Tons)

<u>COUNTRY OF ORIGIN</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Chile	-	-	-	-	25
France	45	30	38	30	28
Greece	386	130	105	417	162
Italy	925	698	773	611	525
Morocco	20	-	-	-	-
Portugal	276	273	241	150	106
Spain	1,137	899	1,170	709	2,132
Sweden	-	-	8	-	-
Switzerland	-	-	-	17	-
Tunisia	-	-	-	22	-
Turkey	-	-	1	1	-
United States	<u>111</u>	<u>54</u>	<u>66</u>	<u>29</u>	<u>2,117</u>
Total	<u>2,902</u>	<u>2,086</u>	<u>2,408</u>	<u>1,986</u>	<u>5,096</u>
Total Value (\$'000)	<u>2,854</u>	<u>2,795</u>	<u>4,597</u>	<u>4,161</u>	<u>4,646</u>

SOURCE: Statistics Canada, Catalogue No. 65-007.

TABLE 41

CANADIAN IMPORTS OF PALM OIL
(Metric Tons)

<u>COUNTRY OF ORIGIN</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Germany, West	-	3	1	-	-
India	-	-	-	-	<u>1/</u>
Indonesia	-	-	2,011	13,085	20,592
Ivory Coast	-	-	-	1,385	-
Malaysia	29,043	19,558	10,503	23,675	31,800
Philippines	-	-	-	-	250
Singapore	-	-	1,020	509	1
United Kingdom	1,528	<u>1/</u>	3	<u>1/</u>	2
United States	<u>289</u>	<u>16</u>	<u>2,658</u>	<u>2,627</u>	<u>2,354</u>
Total	<u>30,861</u>	<u>19,578</u>	<u>16,199</u>	<u>41,283</u>	<u>55,001</u>
Total Value (\$'000)	<u>5,521</u>	<u>4,560</u>	<u>10,671</u>	<u>19,547</u>	<u>19,285</u>

1/ Less than one metric ton.

SOURCE: Statistics Canada, Catalogue No. 65-007.

TABLE 42CANADIAN IMPORTS OF PALM KERNEL OIL

(Metric Tons)

<u>COUNTRY OF ORIGIN</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Hong Kong	-	-	200	-	-
Indonesia	-	-	-	473	2,223
Malaysia	4,400	4,474	2,970	3,966	4,685
Netherlands	15	142	78	13	10
Nigeria	626	975	-	-	-
Singapore	707	-	-	-	44
United States	-	351	1,126	640	3,388
Total	<u>5,749</u>	<u>5,943</u>	<u>4,376</u>	<u>5,092</u>	<u>10,351</u>
Total Value (\$'000)	<u>1,257</u>	<u>2,160</u>	<u>4,459</u>	<u>2,565</u>	<u>3,174</u>

SOURCE: Statistics Canada, Catalogue No. 65-007.

TABLE 43

CANADIAN IMPORTS OF PEANUT OIL
(Metric Tons)

<u>COUNTRY OF ORIGIN</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Belgium-Luxembourg	1,269	-	-	-	-
Brazil	-	-	-	2,444	3,602
France	74	-	-	18	-
Gambia	797	-	-	-	-
Hong Kong	90	94	190	97	52
Japan	-	-	-	5	-
Netherlands	203	-	-	-	-
Nicaragua	-	-	-	-	693
Nigeria	266	2,155	-	-	-
Senegal	-	-	-	507	-
United Kingdom	-	-	519	680	<u>1/</u>
United States	<u>4,697</u>	<u>5,132</u>	<u>4,808</u>	<u>3,095</u>	<u>2,381</u>
Total	<u>7,398</u>	<u>7,382</u>	<u>5,519</u>	<u>6,846</u>	<u>6,734</u>
Total Value (\$'000)	<u>2,766</u>	<u>3,769</u>	<u>5,031</u>	<u>5,950</u>	<u>4,252</u>

1/ Less than one metric ton.

SOURCE: Statistics Canada, Catalogue No. 65-007.

TABLE 44

CANADIAN EXPORTS OF OTHER VEGETABLE OILS AND FATS (NES) ^{1/}
(Metric Tons)

<u>DESTINATION</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Australia	-	-	-	2/	-
Bahamas	2	5	-	-	4
Barbados	34	28	43	10	13
Bermuda	3	20	2	-	-
British Honduras	1	1	-	-	-
Colombia	-	-	-	-	443
Costa Rica	3	-	-	-	-
Cuba	8	14	1	183	4
Cyprus	-	-	-	2/	-
El Salvador	2/	-	-	-	-
Emirates, UA	-	-	-	-	13
Germany, West	-	-	1	2/	2,205
Greenland	-	1/	-	-	-
Guatemala	1	-	-	-	-
Guyana	37	26	154	6	2
Haiti	-	-	-	111	-
Honduras	-	6	-	-	-
Hong Kong	1,234	419	-	-	-
India	-	-	-	-	5
Jamaica	18	6	1	1	-
Japan	2/	-	-	-	-
Jordon	-	-	-	-	5
Kenya	2	2	1/	-	-
Kuwait	-	-	11	-	-
Leeward-Windward Is.	40	31	9	63	45
Mexico	-	9	-	-	-
Netherlands-Antilles	1	-	-	-	-
Pakistan	2,266	-	-	-	-
Saudi Arabia	-	-	-	99	3,156
South Africa	-	-	2/	2/	-
St. Pierre-Miquelon	2/	1	2/	-	-
Sweden	-	-	-	-	17
Taiwan	-	-	-	-	2/
Trinidad-Tobago	132	133	159	29	120
United Kingdom	4,439	12,100	-	71	125
United States	874	445	375	364	811
TOTAL	9,097	13,249	763	944	6,974
TOTAL VALUE (\$'000)	3,093	1,238	513	512	1,914

TABLE 44 (Cont'd)FOOTNOTES TOCANADIAN EXPORTS OF OTHER VEGETABLE OILS AND FATS (NES)^{1/}

- ^{1/} This export class No. 393-99 includes sunflower oil, salad & cooking oil and certain specialty fats like pan greases. Prior to 1973 it included rapeseed oil.
- ^{2/} Less than one metric ton.

SOURCE: Statistics Canada, Catalogue No. 65-004.

CHAPTER 10

SPECIFIED FATS AND OILS

Margarine production continues to increase in volume whereas butter production remains in decline due, at least in part, to consumer resistance to higher butter prices. A study of butterfat utilization (Table 51) graphically illustrates the drop in creamery butter production. At the same time the small increase in utilization in cheese is probably an indication of a trend which may develop in 1977 as more butterfat is diverted to cheese production.

Canadian imports of margarine and shortening (Table 46) continued at a high level, although value was considerably lower than in 1975. At the same time, exports of these products (Table 47) showed a substantial increase, chiefly to Middle East countries.

Production of salad oils continued its steady growth from previous year (Table 45), whereas imports of vegetable cooking fats and packaged salad oils have declined markedly since the peak year of 1974 (Table 48). These figures would suggest that substitution of other fats has occurred within the industry.

In this connection it is interesting to note from Tables 47 and 49 that domestic production of lard declined marginally from 1975, whereas lard imports increased by almost 59% in 1976, at a much lower cost than in 1975.

Canadian exports of tallow, animal oils and fats (Table 50) increased by approximately 14% reflecting the increased cattle slaughter during the year. While the bulk of these products were shipped to traditional export markets, a study of this table indicates some interesting changes in market patterns and developing interest in some markets which have previously not been tapped. Of interest are the sales to West Germany, Iran and Taiwan, the growth in shipments to Italy and Nigeria and the total lack of repeat sales to the USSR. Recent changes in regulations governing tallow specifications made by the Japanese Government may cause sales of Canadian tallows to that country to decline. The table serves to indicate the wide range of market areas available to Canadian products.

Most recent slaughter forecasts for 1977 indicate as expected increase of from 8-10% in hog slaughter whereas beef slaughter is expected to decline from 2-4% from 1976. If these forecasts are realised then we may expect a corresponding increase in lard production and virtually unchanged tallow production as the decline will probably be in animals carrying less finish.

TABLE 45CANADIAN PRODUCTION OF SPECIFIED FATS AND OILS PRODUCTS

(Thousands of Metric Tons)

	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Margarine ^{1/}	96	98	108	119	126
Butter ^{2/}	136	98	108	131	117
<u>SHORTENING</u>					
Packaged ^{3/}	16	17	17	23	90
Bulk ^{4/}	141	163	154	148	81
<u>REFINED OILS</u>					
Salad ^{5/}	64	69	77	81	95
Lard ^{6/}	55	50	50	43	42
<u>TALLOW^{7/}</u>					
Edible	20	18	16	17	16
Inedible	184	184	182	182	199

1/ Includes retail and commercial packages. Commercial sales (21-450 pound) packages account for about 5% of total output.

2/ Includes factory and farm butter.

3/ Retail packages up to 20 pounds only.

4/ Covers commercial (21-450 pound) packages, bulk and other than packaged retail sales of manufacturers of shortening and deodorized shortening oil. Includes baking and frying fats and oils.

5/ Covers packaged and bulk manufacturers' sales.

6/ Rendered lard includes shipments of processed lard in retail and commercial packages and bulk sales.

7/ Shipments for year.

SOURCE: Statistics Canada, Catalogue No.s 32-002 and 32-006

TABLE 46CANADIAN IMPORTS OF MARGARINE AND SHORTENING

(Metric Tons)

<u>COUNTRY OF ORIGIN</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Denmark	--	1	--	--	--
Germany, West	5	1	9	1	4
Greece	--	3	--	--	15
India	--	--	--	--	1
Netherlands	--	--	--	--	2
St. Pierre-Miquelon	--	--	--	--	22
Sweden	80	39	69	5	55
United Kingdom	--	--	--	--	<u>1/</u>
United States	<u>5,047</u>	<u>4,314</u>	<u>11,903</u>	<u>15,695</u>	<u>16,221</u>
TOTAL	<u>5,133</u>	<u>4,360</u>	<u>11,983</u>	<u>15,701</u>	<u>16,322</u>
TOTAL VALUE (\$'000)	<u>1,643</u>	<u>1,743</u>	<u>9,005</u>	<u>11,399</u>	<u>8,967</u>

1/ Less than one metric ton.

SOURCE: Statistics Canada, Catalogue No. 65-007

TABLE 47CANADIAN EXPORTS OF MARGARINE, SHORTENING AND LARD

(Metric Tons)

<u>DESTINATION</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Bahamas	--	--	--	1	--
Bahrain	--	--	--	--	17
Barbados	--	39	--	--	--
Bermuda	24	22	22	14	16
Emirates, UA	--	--	--	--	48
Germany, West	--	--		1	--
Greenland	<u>1/</u>	3	--	--	--
Jamaica	8	4	30	22	35
Japan	--	--	18	--	--
Jordan	--	--	--	--	18
Kuwait	--	--	--	--	67
Leeward-Windward Is.	<u>1/</u>	<u>1/</u>	<u>1/</u>	3	--
Libya	--	--	--	--	7
Netherlands-Antilles	2	3	1	--	--
Qatar	--	--	--	--	15
Saudi Arabia	--	--	--	--	405
St. Pierre-Miquelon	51	50	44	42	25
Trinidad-Tobago	--	--	--	<u>1/</u>	--
United States	148	22	234	182	49
Yemen	--	<u>1/</u>	--	--	--
TOTAL	<u>235</u>	<u>144</u>	<u>352</u>	<u>268</u>	<u>706</u>
TOTAL VALUE (\$'000)	<u>91</u>	<u>100</u>	<u>290</u>	<u>248</u>	<u>543</u>

1/ Less than one metric ton.SOURCE: Statistics Canada, Catalogue 65-004

TABLE 48

CANADIAN IMPORTS OF VEGETABLE COOKING FATS
AND PACKAGED SALAD OILS
(Metric Tons)

<u>COUNTRY OF ORIGIN</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Denmark	-	-	2	-	-
France	20	-	17	12	-
Germany, West	1	-	-	-	-
Greece	-	8	18	15	-
Hong Kong	1	1	-	-	<u>1/</u>
Israel	-	-	1,000	-	<u>1/</u>
Italy	8	-	-	-	-
Singapore	1	-	-	-	-
Sweden	17	26	18	14	5
United Kingdom	4	285	16	57	3
United States	488	709	386	594	135
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
Total	543	1,030	1,461	692	144
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
Total Value (\$'000)	234	636	471	389	109
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>

1/ Less than one metric ton.

SOURCE: Statistics Canada, Catalogue No. 65-007.

TABLE 49

CANADIAN IMPORTS OF LARD, TALLOW, ANIMAL OILS AND FATS

(Metric Tons)

<u>COUNTRY OF ORIGIN</u>	<u>L A R D</u>		<u>1974</u>	<u>1975</u>	<u>1976</u>
	<u>1972</u>	<u>1973</u>			
Australia	--	1	9	--	7
Norway	--	--	--	1/	--
United States	<u>9,782</u>	<u>7,158</u>	<u>17,671</u>	<u>12,118</u>	<u>19,239</u>
TOTAL	<u>9,782</u>	<u>7,160</u>	<u>17,680</u>	<u>12,119</u>	<u>19,246</u>
TOTAL VALUE (\$'000)	<u>2,258</u>	<u>2,531</u>	<u>12,306</u>	<u>8,276</u>	<u>8,000</u>

TALLOW, ANIMAL OILS AND FATS (NES)

<u>COUNTRY OF ORIGIN</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Australia	9	22	3	11	5
Germany, West	--	1	--	10	--
Netherlands	673	--	--	--	1
New Zealand	--	--	--	--	10
United Kingdom	--	1	--	--	--
United States	<u>8,871</u>	<u>3,228</u>	<u>4,314</u>	<u>2,134</u>	<u>1,467</u>
TOTAL	<u>9,553</u>	<u>3,253</u>	<u>4,318</u>	<u>2,155</u>	<u>1,485</u>
TOTAL VALUE (\$'000)	<u>1,929</u>	<u>1,226</u>	<u>1,803</u>	<u>768</u>	<u>639</u>

1/ Less than one metric ton.

SOURCE: Statistics Canada, Catalogue No. 65-007

TABLE 50

CANADIAN EXPORTS OF TALLOW, ANIMAL OILS AND FATS (NES)

(Metric Tons)

DESTINATION	1972	1973	1974	1975	1976
Barbados	--	23	90	27	21
Belgium-Luxembourg	2,438	1,183	598	996	2,022
Bermuda	1/	--	--	--	1
Brazil	--	--	97	--	--
Colombia	--	--	--	52	32
Cuba	995	4,904	13,638	13,587	10,702
Dominican Republic	--	--	18	--	--
France	1/	949	1,002	5	10
Germany, West	902	1,470	--	300	3,857
Ghana	249	--	596	749	--
Guatemala	1	--	32	21	--
Guyana	--	--	--	136	--
Iran	--	--	--	--	1,300
Ireland	--	--	--	300	--
Italy	--	--	--	548	1,413
Jamaica	6	28	238	299	474
Japan	22,713	19,460	15,376	10,400	18,058
Kenya	54	--	--	--	50
Korea, South	--	985	5,272	15,700	13,190
Leeward-Windward Is.	69	59	4	--	4
Malaysia	18	--	--	73	56
Mexico	--	--	16	25	20
Morocco	--	--	--	574	--
Netherlands	23,920	6,709	24,184	16,697	29,077
Netherlands-Antilles	--	--	3	--	--
Nigeria	--	--	--	924	1,319
Norway	--	297	16	71	--
Panama	--	--	--	--	4
People's Republic of China	21,421	9,948	11,112	5,589	2,033
Portugal	--	--	--	52	157
Puerto Rico	--	--	17	--	--
Senegal	--	--	997	708	--
Singapore	1	--	36	158	18
Spain	3,354	936	1,550	9,656	7,390
St. Pierre-Miquelon	1/	1/	1/	--	--
Surinam	22	--	--	--	--
Switzerland	33	93	150	209	272
Taiwan	694	--	--	--	1,680
Trinidad-Tobago	803	588	326	294	503
United Kingdom	17,725	22,140	13,803	5,541	9,778
United States	11,965	16,221	10,885	11,044	9,651
U.S.S.R.	--	--	--	3,774	--
Venezuela	--	18	193	69	66
Zaire	--	--	--	747	--
Zambia	27	--	1,203	--	--
TOTAL	107,423	87,042	101,458	99,335	113,166
TOTAL VALUE (\$'000)	16,479	24,407	41,253	32,218	38,589

TABLE 50 (Cont'd)FOOTNOTES TOCANADIAN EXPORTS OF TALLOW, ANIMAL OILS AND FATS (NES)

1/ Less than one metric ton.

SOURCE: Statistics Canada, Catalogue No. 65-004.

TABLE 51

CANADIAN TRENDS IN BUTTERFAT PRODUCTION AND UTILIZATION
(Thousands of Metric Tons)

Year	Total Milk Production		Butterfat Utilization			
	Whole Milk	Butterfat Equivalent ^{1/}	Manufactured Dairy Products ^{2/}	Fluid Milk Sales ^{3/}	Farm Home Consumed	Fed on Farms
1967	8,259	289	180	82	13	10
1968	8,329	290	184	81	13	10
1969	8,487	297	191	80	13	10
1970	8,306	290	183	82	12	10
1971	8,062	282	174	83	11	10
1972	8,032	281	177	86	7	10
1973	7,659	261	155	87	7	11
1974	7,561	259	153 ^{6/}	89	6	11
1975	8,017	273	169	87	5	12
1976	7,978	269	157	90	5	17

BUTTERFAT UTILIZATION IN MANUFACTURED DAIRY PRODUCTS

Year	Total	Creamery Butter	Cheese ^{4/}	Concentrated Whole Milk Products	Ice-Cream Mix
1967	180	121	33	13	11
1968	184	123	34	12	11
1969	191	129	35	24	5 [/]
1970	183	121	37	23	5 [/]
1971	174	106	38	10	16
1972	177	108	38	10	16
1973	155	92	38	10	14
1974	153 ^{6/}	85	44 ^{6/}	9	14
1975	169	104	41	9	15
1976	157	92	42	8	15

TABLE 51 (Cont'd)

FOOTNOTES TO
CANADIAN TRENDS IN BUTTERFAT PRODUCTION AND UTILIZATION

- 1/ Fat content of milk based on conversion factor of 3.5%.
- 2/ Includes creamery butter, cheddar cheese (bulk of all Canadian cheese production), other cheese, concentrated whole milk products, ice-cream mix.
- 3/ Fluid milk sales represent whole milk sales from farms for use in milk and cream.
- 4/ Includes mainly cheddar cheese and other factory cheese made from whole milk and cream. Excludes creamed cottage cheese.
- 5/ Included with concentrated whole milk products.
- 6/ Revised figure.

SOURCE: Based on unpublished Statistics Canada data.

CHAPTER 11

MARINE AND FISH OILS AND MEALS

Trends in the Fish Reduction Industry

Whereas the latter half of the 1960's was characterized by the rapid growth and development of the Atlantic Coast Fish Meal and Marine Oil industry, the 1970's have, on the other hand, witnessed the peaking and subsequent reversal of this trend. Landings of herring on which this growth phase was based have declined since 1968-70 when landings reached a plateau in excess of 1 million tons, to less than 300,000 tons in each of the past three years. In addition to the decline in the herring catch per se there has been a progressive diversion of landings into the production of food products, in response to the emergence of a market for Canadian food herring in Europe and Japan which has further reduced the raw material available to the reduction industry.

Given the growing importance that is being placed on utilization of herring for direct food production relative to reduction, it is difficult to visualize any reversal in the current declining trend in landings of herring for reduction into meal and oil. It is too early to assess the benefits on herring stocks, particularly on the east coast from the proposed establishment by Canada of a 200-mile economic fishing zone. However, any increase in supplies are likely to be gradual and it is expected that every effort will be made towards utilizing herring for food.

Marine Oil

In 1976, the total output of marine oil in Canada was 9,649 tons (Table 52), as against 13,272 in 1975 and over 36,000 tons in 1970. This decline was primarily attributable to the decline in the production of herring oil which fell by some 75% over the period. Although groundfish body and offal oil has declined about 60% since 1973 to 3,883 tons in 1976, it has become the major source of marine oil and a gradual upward trend in production is anticipated.

Fish Meal

The production of fish meal in 1976 was 57,276 tons, an increase of over 10,000 tons over 1975 (Table 55). This was largely attributable to an increase in groundfish reduction of over 20% above the level of 1974 and 1975 to 33,342 tons in 1976. This upward trend is expected to continue and to increase sharply in the 1980's as a result of larger Canadian catches on the Atlantic coast as a consequence of the extended fishing zone.

The scope for utilization of the herring resource - which historically has provided the main source of raw material for reduction - is now severely circumscribed; Pacific herring may now be harvested for food purposes only, and the raw material available to the reduction industry is consequently confined to that portion of the catch not suitable for conversion to food products. Herring meal production has declined from 16,484 tons in 1974 to 13,047 tons in 1976, but the latter production level could be maintained over the next few years.

TABLE 52CANADIAN PRODUCTION OF MARINE OILS BY TYPES AND AREAS

(Metric Tons)

<u>ATLANTIC COAST</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976^{1/}</u>
Body or Offal Oil:				
Groundfish	11,039	7,222	4,543	3,883
Herring	15,022	13,936	5,517	3,599
Other ^{2/}	394	755	18	54
Liver Oil:				
Groundfish	419	226	279	52
Seal Oil:	--	--	1,486	661
ATLANTIC TOTAL	<u>26,874</u>	<u>22,139</u>	<u>11,843</u>	<u>8,249</u>
 <u>PACIFIC COAST</u>				
Body or Offal Oil:				
Herring	1,105	585	x ^{3/}	x ^{3/}
Salmon	802	415	x ^{3/}	x ^{3/}
Other	217	100	x ^{3/}	x ^{3/}
PACIFIC TOTAL	<u>2,124</u>	<u>1,100</u>	<u>1,429</u>	<u>1,400^{4/}</u>
CANADA TOTAL	<u>28,998</u>	<u>23,239</u>	<u>13,272</u>	<u>9,649</u>

^{1/} Preliminary^{2/} Primarily whale oil^{3/} Confidential - to meet secrecy requirements of the Statistics Act.^{4/} EstimateSOURCE: Based on Environment Canada data.

TABLE 53

CANADIAN IMPORTS OF FISH AND MARINE OILS (NES)
(Metric Tons)

<u>COUNTRY OF ORIGIN</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Denmark	--	6	<u>1/</u>	1	<u>1/</u>
France	--	--	<u>1/</u>	--	--
Germany, West	--	--	<u>1/</u>	--	4
Japan	--	6	89	--	9
Netherlands	--	--	--	--	6
Norway	167	134	179	629	150
South Africa	73	89	92	--	--
United Kingdom	234	323	165	49	28
United States	<u>1,175</u>	<u>676</u>	<u>322</u>	<u>199</u>	<u>99</u>
TOTAL	<u>1,651</u>	<u>1,237</u>	<u>849</u>	<u>878</u>	<u>299</u>
TOTAL VALUE (\$'000)	<u>439</u>	<u>424</u>	<u>467</u>	<u>500</u>	<u>233</u>

1/ Less than one metric ton.

SOURCE: Statistics Canada, Catalogue No. 65-007.

TABLE 54CANADIAN EXPORTS OF MARINE OILS BY TYPES

(Metric Tons)

	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Cod Liver Oil, Sun Rotted	998	1,270	1,043	868	1,381
Herring Oil	3,401	2,812	5,488	2,277	5,315
Whale Oil	2,177	1,224	--	--	5
Fish & Marine Animal Oil, NES	<u>635</u>	<u>2,676</u>	<u>2,313</u>	<u>1,746</u>	<u>3,408</u>
TOTAL	<u>7,212</u>	<u>7,983</u>	<u>8,845</u>	<u>4,891</u>	<u>10,110</u>
TOTAL VALUE (\$'000)	<u>1,368</u>	<u>1,795</u>	<u>3,763</u>	<u>1,837</u>	<u>2,968</u>

SOURCE: Statistics Canada, Catalogue No. 65-004

TABLE 55CANADIAN PRODUCTION OF FISH MEALS BY TYPES AND AREAS

<u>ATLANTIC COAST</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976^{1/}</u>
Groundfish	34,485	26,700	25,708	33,342
Herring	13,650	16,484	14,327	13,047
Other	<u>1,721</u>	<u>2,321</u>	<u>589</u>	<u>4,387</u>
ATLANTIC TOTAL	<u>49,856</u>	<u>45,505</u>	<u>40,624</u>	<u>50,776</u>
 <u>PACIFIC COAST</u>				
Herring	4,278	4,711	x ^{2/}	x ^{2/}
Salmon	1,561	887	x ^{2/}	x ^{2/}
Other	<u>592</u>	<u>554</u>	<u>x^{2/}</u>	<u>x^{2/}</u>
PACIFIC TOTAL	<u>6,431</u>	<u>6,152</u>	<u>6,540</u>	<u>6,500^{3/}</u>
CANADA TOTAL	<u>56,287</u>	<u>51,657</u>	<u>47,164</u>	<u>57,276</u>

^{1/} Preliminary^{2/} Confidential - to meet secrecy requirements of the Statistics Canada Act.^{3/} EstimateSOURCE: Based on Environment Canada data.

TABLE 56CANADIAN IMPORTS OF FISH MEAL

(Metric Tons)

<u>COUNTRY OF ORIGIN</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Cuba	-	-	-	-	163
Denmark	-	-	10	-	-
France	-	-	-	59	-
Germany, West	-	-	<u>1/</u>	-	229
Japan	-	-	-	2	-
Peru	944	21	-	-	-
Puerto Rico	20	81	-	41	40
United Kingdom	-	-	2	-	7
United States	<u>255</u>	<u>379</u>	<u>245</u>	<u>209</u>	<u>521</u>
TOTAL	<u>1,220</u>	<u>482</u>	<u>261</u>	<u>311</u>	<u>962</u>
TOTAL VALUE (\$'000)	<u>216</u>	<u>121</u>	<u>83</u>	<u>87</u>	<u>309</u>

1/ Less than one metric ton.SOURCE: Statistics Canada, Catalogue No. 65-007.

TABLE 57

CANADIAN EXPORTS OF FISH MEAL AND CONDENSED SOLUBLES
(Metric Tons)

	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Herring Meal and Pilchard Meal	20,605	12,997	16,281	14,733	14,972
Fish Meal NES	12,089	16,386	18,393	9,515	17,000
Fish Condensed Homogenized Solubles	<u>176</u>	<u>185</u>	<u>-</u>	<u>43</u>	<u>941</u>
TOTAL (Meal Only)	<u>32,870</u>	<u>29,568</u>	<u>34,678</u>	<u>24,291</u>	<u>32,913</u>
TOTAL VALUE (Meal Only) (\$ '000)	<u>6,703</u>	<u>11,023</u>	<u>12,160</u>	<u>6,071</u>	<u>9,422</u>

SOURCE: Statistics Canada, Catalogue No. 65-004.

CHAPTER 12

THE CANADIAN FLAXSEED SITUATION

Canadian Flaxseed Production

Flaxseed production increased slightly in the crop year 1975-76 over 1974-75 but still well below the 1971-72 production (Table 58). Only two flaxseed crushing plants are operating in Canada since the 1974-75 crop year.

Canadian Exports of Flaxseed

Canadian exports of flaxseed increased in 1976 over 1975 but continues its downward trend since 1972 (Table 60). The major markets continue to be Japan, West Germany and the Netherlands. Exports to the United States increased in 1976 over 1975 by 36.7 thousand metric tons because of a shortage of supplies in the United States. United States production is expected to increase in the 1977-78 crop year.

Canadian Exports of Linseed Oil and Meal

Exports of linseed oil and meal increased in 1976 over 1975 but are still well below the exports of 1972 (Tables 61 and 62).

TABLE 58

CANADIAN SUPPLY AND DISPOSITION OF FLAXSEED,
LINSEED OIL AND LINSEED MEAL
 (Crop Year)

	<u>1971/72</u>	<u>1972/73</u>	<u>1973/74</u>	<u>1974/75</u>	<u>1975/76</u>
	(Thousands of Bushels)				
<u>FLAXSEED</u>					
Stocks, Starting ^{1/}	25,306	16,032	7,673	7,911	8,605
Production	22,387	17,617	19,400	13,800	17,500
Imports	-	3	17	16	-
Exports	25,741	19,640	15,503	10,519	7,681
Domestic Crushing	3,101	2,633	762	x ^{2/}	x ^{2/}
 <u>LINSEED OIL</u>					
	(Metric Tons)				
Exports	14,919	10,588	2,230	2,184	5,817
Domestic Production	26,762	22,762	6,601	x ^{2/}	x ^{2/}
 <u>LINSEED MEAL</u>					
	(Metric Tons)				
Exports	20,539	12,735	24	196	636
Domestic Production	49,875	42,037	11,932	x ^{2/}	x ^{2/}

^{1/} Total Stocks in all positions.

^{2/} Confidential - to meet secrecy requirements of the Statistics Act.

SOURCE: Statistics Canada, Catalogue No. 22-006.

TABLE 59

CANADIAN IMPORTS OF FLAXSEED
(Metric Tons)

<u>COUNTRY OF ORIGIN</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Kenya	2	--	--	--	--
United States	<u>15</u>	<u>86</u>	<u>451</u>	<u>337</u>	<u>1/</u>
TOTAL	<u>17</u>	<u>86</u>	<u>451</u>	<u>337</u>	<u>1/</u>
TOTAL VALUE (\$'000)	<u>3</u>	<u>25</u>	<u>333</u>	<u>171</u>	<u>--</u>

1/ Less than one metric ton.

SOURCE: Statistics Canada, Catalogue No. 65-007

TABLE 60

CANADIAN EXPORTS OF FLAXSEED

(Metric Tons)

<u>DESTINATION</u>	<u>1 9 7 2</u>	<u>1 9 7 3</u>	<u>1 9 7 4</u>	<u>1 9 7 5</u>	<u>1 9 7 6</u>
Australia	12,031	--	5,633	--	--
Austria	--	--	--	34	36
Belgium-Luxembourg	28,552	11,886	7,477	2,951	1,763
Czechoslovakia	5,973	15,826	25,004	17,717	3,151
Denmark	316	2,062	--	--	--
France	8,181	7,772	5,202	1,848	508
Germany, East	--	--	3,860	--	--
Germany, West	79,224	117,865	110,680	77,619	81,224
Greece	11,238	1,371	2,184	1,050	1,500
Italy	7,910	12,755	--	--	--
Japan	107,328	110,123	77,027	65,330	90,647
Korea, South	4,714	2,971	--	--	1,750
Lebanon	3,484	--	--	--	--
Netherlands	252,705	86,808	41,289	31,516	11,078
New Zealand	--	--	2,199	--	--
Norway	4,000	--	--	--	--
Panama	--	--	--	2,117	--
Poland	--	--	23,263	18,926	--
Spain	11,734	10,833	6,500	6,580	8,547
Sweden	--	--	--	72	54
Switzerland	10,739	1,906	1,237	108	1,468
Trinidad-Tobago	--	--	--	2	--
United Kingdom	46,902	49,841	31,337	15,573	4,672
United States	2	1,170	12,659	3,493	40,198
TOTAL	<u>594,597</u>	<u>433,200</u>	<u>351,031</u>	<u>244,942</u>	<u>246,602</u>
TOTAL VALUE (\$'000)	<u>68,511</u>	<u>112,984</u>	<u>148,631</u>	<u>83,815</u>	<u>66,278</u>

SOURCE: Statistics Canada, Catalogue No. 65-004

TABLE 61

CANADIAN EXPORTS OF LINSEED OIL
(Metric Tons)

<u>DESTINATION</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Bahamas	<u>1/</u>	--	--	--	--
Barbados	2	--	--	--	--
Belgium-Luxembourg	--	--	--	1,526	1,965
Bermuda	1	--	--	1	1
Ecuador	--	1	--	--	--
French West Indies	--	--	--	--	<u>1/</u>
Germany, West	711	--	--	--	--
Guatemala	--	--	--	--	--
Jamaica	--	--	--	<u>1/</u>	--
Liberia	--	--	2	2	--
Netherlands	--	--	--	1,590	2,848
Netherlands-Antilles	--	--	--	--	--
Nigeria	--	<u>1/</u>	--	--	--
United Kingdom	14,488	5,962	581	398	250
United States	839	96	--	36	34
Venezuela	<u>40</u>	<u>18</u>	<u>8</u>	<u>7</u>	<u>8</u>
TOTAL	<u>16,082</u>	<u>6,078</u>	<u>592</u>	<u>3,562</u>	<u>5,108</u>
TOTAL VALUE (\$'000)	<u>3,276</u>	<u>2,314</u>	<u>655</u>	<u>3,237</u>	<u>2,758</u>

1/ Less than one metric ton.

SOURCE: Statistics Canada, Catalogue No. 65-004

TABLE 62CANADIAN EXPORTS OF LINSEED CAKE AND MEAL

(Metric Tons)

<u>DESTINATION</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Barbados	816	--	--	--	--
Belgium-Luxembourg	--	--	--	--	481
Denmark	1,872	--	--	--	--
Germany, West	3,744	--	--	--	3,150
Guyana	5	--	--	--	--
Leeward-Windward Is.	124	4	--	--	--
Netherlands	3,173	1,873	--	--	--
Sweden	--	--	--	--	22
Trinidad-Tobago	416	168	49	114	60
United Kingdom	4,852	2,313	--	--	--
United States	<u>2,693</u>	<u>1,151</u>	<u>64</u>	<u>80</u>	<u>159</u>
TOTAL	<u>17,699</u>	<u>5,511</u>	<u>114</u>	<u>194</u>	<u>3,875</u>
TOTAL VALUE (\$'000)	<u>1,398</u>	<u>822</u>	<u>24</u>	<u>37</u>	<u>835</u>

SOURCE: Statistics Canada Catalogue No. 65-004.

TABLE 63

QUALITY DATA FOR WESTERN CANADIAN FLAXSEED, SURVEY SAMPLES OF 1975 AND 1976 CROPS

<u>WESTERN CANADA</u>	<u>Oil Content^{1/}</u>			<u>Iodine Value</u>			<u>Protein Content^{2/}</u>			<u>No. of Samples</u>		
	<u>1975</u>	<u>1976</u>	<u>1975/76^{3/}</u>	<u>1975</u>	<u>1976</u>	<u>1975/76^{3/}</u>	<u>1975</u>	<u>1976</u>	<u>1975/76^{3/}</u>	<u>1975</u>	<u>1976</u>	<u>1975/76^{3/}</u>
No. 1 CW	42.1	43.0	43.1	188	192	194	42.6	41.1	41.1	246	289	1,012
No. 2 CW	42.2	43.8	42.6	188	193	199	42.4	43.3	39.0	33	4	32
No. 3 CW	41.4	-	42.6	188	-	198	43.8	-	38.2	11	-	14
No. 4 CW	-	-	39.6	-	-	196	-	-	37.1	-	-	3
All Grades	42.1	43.0	43.1	188	192	194	42.6	41.1	41.0	290	293	1,061

ALL GRADES

Manitoba	41.7	43.0	-	185	192	-	42.8	41.8	-	135	161	-
Saskatchewan	42.1	42.9	-	189	192	-	42.9	39.7	-	103	94	-
Alberta	43.2	43.2	-	195	194	-	41.4	41.7	-	52	38	-

1/ Oil Content of seed is reported on moisture-free basis.

2/ Protein Content is reported on oil-free meal and moisture-free basis.

3/ Crop year final.

SOURCE: Canadian Grain Commission, Crop Bulletin Nos. 129 and 133.

TABLE 64SUMMERFALLOW AND STUBBLE CULTIVATION OF FLAXSEED

<u>Seeded Area</u>	<u>Summer- fallow</u>	<u>Stubble</u>	<u>Total</u>
		('000 Acres)	
1972	746	574	1,320
1973	776	674	1,450
1974	731	719	1,450
1975	658	742	1,400
1976	352	523	875

<u>Distribution</u>		(Per Cent)	
1972	57	43	100
1973	54	46	100
1974	50	50	100
1975	47	53	100
1976	40	60	100

<u>Average Yield Per Seeded Acre</u>		(Bushels)	
1972	15.2	11.0	13.3
1973	14.6	12.0	13.4
1974	10.5	8.5	9.5
1975	14.6	10.6	12.5
1976	16.2	11.5	13.4

<u>Production</u>		(Million Bushels)	
1972	11.3	6.3	17.6
1973	11.3	8.1	19.4
1974	7.7	6.1	13.8
1975	9.6	7.9	17.5
1976	5.7	6.0	11.7

SOURCE: Statistics Canada, Catalogue No. 22-002

TABLE 65

CANADIAN FLAXSEED PRICES^{1/}
(Crop Year)

<u>M O N T H</u>	<u>1971/72</u>	<u>1972/73</u>	<u>1973/74</u>	<u>1974/75</u>	<u>1975/76</u>
 (Cents and Eighths per Bushel)				
August	234/6	305/7	878/7	1099/7	854/3
September	226/7	325/4	885/6	1172	790
October	243/2	357/7	898/6	1219/1	722/2
November	238/4	353	1018/5	1094/2	655/7
December	236/3	366/7	1060/5	1066/5	628/5
January	248/7	336/4	1122/6	922/4	657
February	259	335/6	1167	810/5	653/2
March	277/6	383/3	1107	784/1	646
April	285	378	967/3	861/3	634
May	271/2	352/6	991/6	825/6	657/7
June	277/2	301/7	979/5	779/7	713/3
July	<u>288/1</u>	<u>395/6</u>	<u>1095/2</u>	<u>815/2</u>	<u>742/6</u>
Yearly Average	<u>257/2</u>	<u>332/6</u>	<u>1014/4</u>	<u>954/2</u>	<u>696/3</u>

1/ Winnipeg Grain Exchange No 1 C.W. Flaxseed, basis Thunder Bay.

SOURCE: Statistics Canada, Catalogue No. 22-006.

CHAPTER 13OTHER INEDIBLE FATS AND OILS

Grouped together for consideration in this publication as other inedible fats and oils are castor, tung and tall oils, tall oil pitch, tall oil fatty acids, chemically modified oils, fats and waxes and mixtures and derivatives of oils, fats and waxes.

Canadian imports of castor oil in 1976 was about 2/3 of the amount imported in 1975 (Table 66). All of the drop was accounted for by imports from Brazil while our imports from the United States actually increased by some 134 metric tons. The average price paid per metric ton was \$625 in 1976 compared to \$610 in 1975, \$890 in 1974 and \$1,025 in 1973.

Tung oil imports increased slightly in 1976 over 1975 with Paraguay becoming our major supplier (Table 67). During the past year supplies from Argentina, the People's Republic of China and the United States decreased substantially while Brazil became a nominal supplier for the first time in three years. Average cost per metric ton of this item in 1976 was just over \$900 as against \$640 in 1975 and \$725 in 1974.

Imports of tall oil, tall oil pitch and tall oil fatty acids remained at traditional levels in 1976 (Table 68). The United States supplies Canada with 99.9% of her requirements. The average cost per metric ton in 1976 was between \$375 and \$380 compared with \$460-\$465 in 1975 and \$500-\$505 in 1974.

Canadian imports of chemically modified oils, fats and waxes also remained at traditional levels of the past four years (Table 69). The United States and the United Kingdom continue to be our major suppliers while Brazil and the Netherlands-Antilles ceased to export any quantity to Canada in 1976. Prices per metric ton averaged \$995 in 1976 compared to \$1,185 in 1975 and \$950 in 1974.

Imports of mixtures and derivatives of oils, fats and waxes in 1976 were at the second lowest level in five years (Table 70). The United States supplied some 96% of our requirements in 1976 while the average price paid per metric ton was 1976 - \$730, 1975 - \$450 and 1974 - \$670.

As for Canadian exports of chemically modified oils, fats and waxes the increased level of 1975 was almost attained in 1976 (Table 71). The United States took 99.9% of our supplies and paid on the average \$220 per metric ton as compared to a price of \$175 in 1975 and \$475 in 1974.

TABLE 66CANADIAN IMPORTS OF CASTOR OIL

(Metric Tons)

<u>COUNTRY OF ORIGIN</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Brazil	2,023	2,401	1,529	1,697	968
Colombia	-	8	-	-	-
United States	<u>147</u>	<u>377</u>	<u>320</u>	<u>211</u>	<u>345</u>
Total	<u>2,170</u>	<u>2,787</u>	<u>1,850</u>	<u>1,908</u>	<u>1,313</u>
Total Value (\$'000)	<u>1,035</u>	<u>2,858</u>	<u>1,646</u>	<u>1,169</u>	<u>822</u>

SOURCE: Statistics Canada, Catalogue No. 65-007.

TABLE 67CANADIAN IMPORTS OF TUNG OIL

(Metric Tons)

<u>COUNTRY OF ORIGIN</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Argentina	584	991	127	141	70
Brazil	-	14	-	-	14
Denmark	-	-	-	-	<u>1/</u>
Paraguay	229	57	42	56	381
People's Rep. of China	20	89	183	70	20
United States	<u>189</u>	<u>88</u>	<u>70</u>	<u>423</u>	<u>247</u>
Total	<u>1,023</u>	<u>1,241</u>	<u>425</u>	<u>690</u>	<u>734</u>
Total Value (\$'000)	<u>240</u>	<u>527</u>	<u>308</u>	<u>441</u>	<u>663</u>

1/ Less than one metric ton.SOURCE: Statistics Canada, Catalogue No. 65-007.

TABLE 68

CANADIAN IMPORTS OF TALL OIL, TALL OIL PITCH
AND TALL OIL FATTY ACIDS

	(Metric Tons)				
	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
<u>TALL OIL AND TALL OIL PITCH</u>					
Netherlands	-	4	-	-	-
United States	1,578	1,502	2,254	2,378	2,849
<u>TALL OIL FATTY ACIDS</u>					
Germany, West	-	-	-	-	15
People's Republic of China	-	-	-	2	-
United States	<u>6,912</u>	<u>5,807</u>	<u>4,715</u>	<u>5,053</u>	<u>4,806</u>
Total	<u>8,490</u>	<u>7,314</u>	<u>6,969</u>	<u>7,433</u>	<u>7,670</u>
Total Value (\$'000)	<u>1,718</u>	<u>1,931</u>	<u>3,500</u>	<u>3,447</u>	<u>2,906</u>

SOURCE: Statistics Canada, Catalogue No. 65-007.

TABLE 69

CANADIAN IMPORTS OF CHEMICALLY MODIFIED OILS,
FATS AND WAXES

(Metric Tons)

<u>COUNTRY OF ORIGIN</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Brazil	-	-	20	69	-
Denmark	1	1	-	<u>1/</u>	-
France	<u>1/</u>	<u>1/</u>	3	-	-
Germany, West	3	3	8	8	72
Greece	-	-	-	3	-
Israel	-	-	-	-	<u>1/</u>
Japan	-	15	-	-	-
Netherlands	410	418	398	442	214
Netherlands-Antilles	-	-	-	23	-
Switzerland	-	-	-	<u>1/</u>	-
United Kingdom	30	419	55	1,125	1,219
United States	<u>3,319</u>	<u>6,569</u>	<u>5,198</u>	<u>4,176</u>	<u>4,606</u>
Total	<u>3,764</u>	<u>7,425</u>	<u>5,677</u>	<u>5,850</u>	<u>6,112</u>
Total Value (\$'000)	<u>1,776</u>	<u>3,985</u>	<u>5,401</u>	<u>6,925</u>	<u>6,084</u>

1/ Less than one metric ton.

SOURCE: Statistics Canada, Catalogue No. 65-007.

TABLE 70

CANADIAN IMPORTS OF MIXTURES AND DERIVATIVES
OF OILS, FATS AND WAXES
(Metric Tons)

<u>COUNTRY OF ORIGIN</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Belgium-Luxembourg	-	-	1	-	-
Brazil	-	-	-	20	-
France	<u>1/</u>	-	3	6	1
Germany, West	362	41	103	98	116
India	-	-	-	-	<u>1/</u>
Japan	-	-	-	-	-
Netherlands	1	2	1	-	<u>1/</u>
Norway	-	-	-	-	118
Sweden	-	2	-	-	-
United Kingdom	197	147	66	153	316
United States	<u>13,906</u>	<u>15,144</u>	<u>14,780</u>	<u>10,886</u>	<u>12,031</u>
TOTAL	<u>14,468</u>	<u>15,338</u>	<u>14,958</u>	<u>11,163</u>	<u>12,585</u>
TOTAL VALUE (\$'000)	<u>6,079</u>	<u>6,996</u>	<u>10,022</u>	<u>8,415</u>	<u>9,195</u>

1/ Less than one metric ton.

SOURCE: Statistics Canada, Catalogue No. 65-007.

TABLE 71CANADIAN EXPORTS OF CHEMICALLY MODIFIED OILS,FATS AND WAXES

(Metric Tons)

<u>DESTINATION</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Australia	-	-	1	-	-
Bahamas	<u>1/</u>	-	<u>1/</u>	-	-
Barbados	-	-	-	27	-
Bermuda	<u>1/</u>	<u>1/</u>	-	-	-
Brazil	-	22	-	-	-
Cuba	17	-	-	-	-
Ecuador	1	-	-	-	-
France	219	-	32	14	-
Germany, West	218	44	24	<u>1/</u>	2
Guyana	-	-	-	<u>1/</u>	-
Israel	-	-	-	4	-
Italy	45	16	-	-	-
Japan	539	498	240	20	--
Leeward-Windward Is.	-	<u>1/</u>	-	-	-
Netherlands-Antilles	1	-	1	-	-
Panama	-	<u>1/</u>	-	-	-
Peru	2	-	-	-	-
Poland	-	-	-	-	<u>1/</u>
United Kingdom	587	19	36	18	-
United States	807	1,461	1,759	3,212	3,008
Venezuela	<u>17</u>	<u>--</u>	<u>1</u>	<u>9</u>	<u>1</u>
TOTAL	<u>2,458</u>	<u>2,062</u>	<u>2,097</u>	<u>3,306</u>	<u>3,012</u>
TOTAL VALUE (\$'000)	<u>930</u>	<u>821</u>	<u>995</u>	<u>578</u>	<u>663</u>

1/ Less than one metric ton.SOURCE: Statistics Canada, Catalogue No. 65-004.

CHAPTER 14SELECTED FINISHED PRODUCTS

Canadian production of peanut butter remained over 30,000 metric tons for the second year in a row although production was down some 6% in 1976 over 1975 (Table 72). Continuing reasonable prices for competing protein products no doubt has been responsible for the levelling off of the market.

The amount of Canadian production of salad dressings and mayonnaise continues to fall and has returned to the levels of 1972 at 35,942 metric tons.

Sandwich spread production remains fairly steady but has also returned to the level of 1972.

TABLE 72

CANADIAN PRODUCTION OF PEANUT BUTTER, SALAD DRESSINGS
AND MAYONNAISE, AND SANDWICH SPREADS
(Metric Tons)

<u>PRODUCT</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Peanut Butter	26,308	25,628	29,211	33,211	31,328
Salad Dressings ^{1/} and Mayonnaise ^{2/}	35,698	39,326	41,504	38,379	35,942
Sandwich Spreads	<u>2,630</u>	<u>2,948</u>	<u>2,766</u>	<u>x^{3/}</u>	<u>2,609</u>
Total	<u>64,636</u>	<u>67,902</u>	<u>73,481</u>	<u>-</u>	<u>69,879</u>

1/ Salad dressing and French dressings shall contain not less than 35% vegetable oil.

2/ Mayonnaise, mayonnaise dressing and mayonnaise salad dressing shall contain not less than 65% vegetable oil.

3/ Confidential to meet secrecy requirements of the Statistics Act.

SOURCE: Statistics Canada, Catalogue No. 32-018

CONVERSION FACTORSSTATUTORY WEIGHT PER BUSHEL AND BUSHEL EQUIVALENT PER METRIC TON

<u>OILSEED</u>	<u>Pounds</u>	<u>Kilograms</u>	<u>Bushel Equivalent Per Metric Ton</u>
Flaxseed	56	25.402	39.368
Soybeans	60	27.216	36.744
Rapeseed	50	22.680	44.092
Sunflowerseed	30	13.608	73.487
Mustardseed	50	22.680	44.092

<u>OILSEED PRODUCTS</u>	<u>Extraction Rate</u> (Per Cent)	<u>Yield Per Bushel</u> (Pounds)	<u>Weight of Gallon</u> (Pounds)
Flaxseed, Oil	35.4	19.8	9.3
Linseed Meal	61.7	34.6	-
Soybeans, Oil	17.7	10.6	9.2
Meal	80.0	47.3	-
Rapeseed, Oil ^{1/}	40.0	20.0	9.1
Meal	57.5	28.75	-
Sunflowerseed, Oil ^{2/}	40.0	12.0	9.2
Meal	38.0	11.4	-
Mustardseed, ^{3/} Oil (Yellow)	28	-	-
Oil (Oriental)	40	-	-
Oil (Brown)	36	-	-

- ^{1/} Rapeseed oil yields seem to have reached a fairly stable level of about 40 per cent on an "as received" basis. The previous factor of 37.5 per cent has been changed accordingly.
- ^{2/} The introduction of new sunflowerseed varieties has increased the oil yield on crushing to the 40 per cent level. The previous factor of 36 per cent has been changed accordingly. The meal yields continue to show fluctuations, and this factor has not been changed.
- ^{3/} Mustardseed is not crushed in Canada, and is primarily used for condiment purposes. Yellow, oriental and brown mustardseed varieties are grown in Canada, and the theoretical extraction rates reflect average oil contents of the seed, calculated on a dry basis.

OTHER PRODUCTS: Marine Oils: 1 Imperial gallon = 9.1 pounds.

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