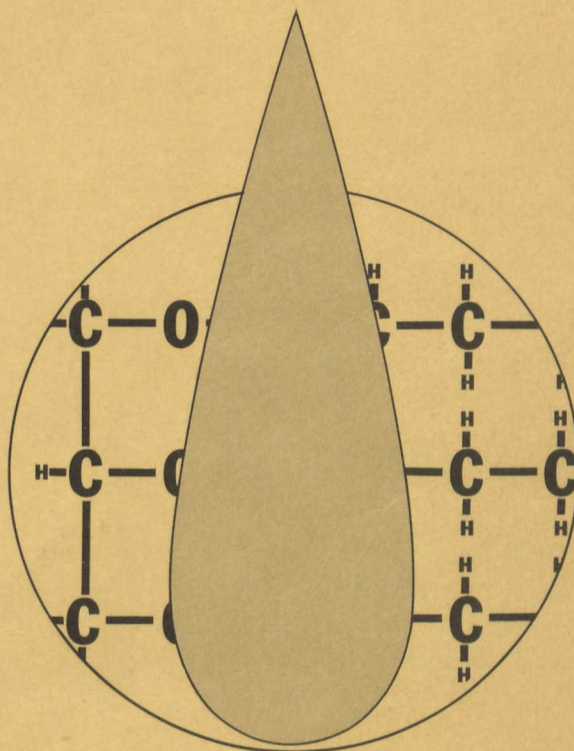


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FATS AND OILS IN CANADA/SEMI ANNUAL REVIEW



DEPARTMENT OF INDUSTRY FOOD PRODUCTS BRANCH



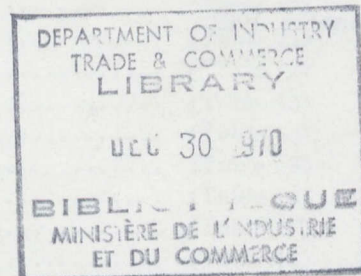
DECEMBER 1967

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[Canada]
DEPARTMENT OF INDUSTRY

FATS & OILS IN CANADA

Semi-Annual Review

DECEMBER 1967



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Prepared by: [Edible Oils Section]
Food Products Branch
Department of Industry
Ottawa, Canada.

INTRODUCTION

This is the fourth issue of "Fats and Oils in Canada", a semi-annual review, prepared by the Food Products Branch. It contains in one publication, statistical information of relevance to the fats and oils industry in Canada, as well as an interpretation of these data.

In addition, "Fats and Oils in Canada" reports on significant technical and economic developments in Canada and abroad which are likely to affect the Canadian industry.

The Canadian statistical data are based on material provided by the Dominion Bureau of Statistics, the Department of Agriculture, the Department of Fisheries, and the Department of Trade and Commerce. Additional statistics were obtained from a variety of domestic and foreign sources.

"Fats and Oils in Canada" is meant 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.

If you wish to have your name or that of your company added to our mailing list, please write to:

Edible Oils Section,
Food Products Branch,
Department of Industry,
Ottawa 4, Canada.

December, 1967.

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CANADIAN REVIEW

1. Canadian Production of Fats and Oils

The total production showed no significant change in 1966 compared with 1965. However, in the vegetable oil sector, rapeseed oil output increased by nearly 34 million pounds, while sunflowerseed oil production declined by 2.2 million pounds.

Production of lard and herring oil decreased in 1966 compared with 1965, but as a result of the growth in rapeseed oil output, the total edible oil production increased from 734 million pounds to 749 million pounds.

The inedible fats and oils sector also showed a moderate decline in output from 278 million pounds to 267 million pounds.

2. Canadian Imports of Fats and Oils

Total imports rose from 404 million pounds to 482 million pounds during this period, again largely as a result of the increase in vegetable oil imports for the manufacture of margarine, shortenings and salad and cooking oils. This area accounted for an increase of 50 million pounds.

The increase in butter oil imports can be traced to shipments which were re-exported, and therefore never entered the Canadian consumer market.

3. Canadian Exports of Fats and Oils

The apparent increase in exports results from oilseed shipments. Actual exports of fats and oils have decreased, especially in the marine oil and linseed oil sectors.

Although the preparation of a complete supply and disposition table for fats and oils has been left out, Tables 1, 2 and 3 will help the reader to analyze developments in areas of particular interest. It seems clear that the most significant conclusion is the considerable increase in per capita consumption of edible fats and oils, which may have amounted to between two and three pounds in 1966.

TABLE 1
Canadian Production of Fats and Oils
(thousands of pounds)

	1963	1964	1965	1966
<u>Primarily Edible</u>				
<u>Vegetable Oils:</u> ⁽¹⁾				
Soybeans (oil equivalent) ⁽²⁾	53,000	74,000	85,000	91,000
Soybean oil ⁽³⁾	186,750	200,318	198,588	197,867
Rapeseed (oil equivalent) ⁽⁴⁾	156,700	248,000	427,500	478,000
Rapeseed oil	30,711	34,116	51,808	84,447
Sunflowerseed (oil equivalent) ⁽⁵⁾	12,000	10,000	10,000	10,000
Sunflower seed oil	2,368	6,699	6,658	4,430
Total ⁽⁶⁾	219,829,	241,133	257,054	286,744
<u>Animal Fats:</u>				
Edible tallow	42,130	49,588	49,950	48,370
Lard	100,038	108,177	96,769	86,302
Butter (as butter oil) ⁽⁷⁾	285,000	285,000	273,000	270,500
Total	427,168	442,765	419,719	405,172
<u>Marine Oils:</u>				
Herring	54,200	49,230	48,890	44,397
Seal	1,534	1,270	2,350	3,294
Whale	6,500	9,800	6,198	9,361
Total ⁽⁸⁾	62,234	60,300	57,438	57,052
Total Edible Oil Production	709,231	744,198	734,211	748,968
<u>Primarily Inedible</u>				
Flaxseed (oil equivalent)	419,000	402,000	553,000	468,000
Linseed oil	46,733	58,935	54,858	48,547
Inedible tallow	174,471	198,653	204,392	194,113
Grease, other than white	5,286	5,951	4,846	3,104
Other oils and fats ⁽⁹⁾	8,147	7,792	6,585	10,174
Marine oils	8,820	9,017	7,545	10,919
Total Inedible Oil Production ⁽¹⁰⁾	243,457	280,348	278,226	266,888
Total Edible and Inedible Fats and Oils Production (excluding oil equivalents of oilseeds)	952,688	1,024,546	1,012,437	1,015,856

Source: Based on DBS data.

- (1) Corn oil and cocoa butter not included, since production data are not published. Based on consumption and import volumes, domestic corn oil production in 1966 was estimated at approximately 8 million pounds.
- (2) Oil equivalent of soybeans: used 17.7 per cent as conversion factor. Actual recovery varies from year to year, amounting to 16.5 per cent in 1966.
- (3) Soybean oil production is based to approximately 75 per cent on imported beans.
- (4) Oil equivalent of rapeseed: used 37.5 percent as conversion factor. Actual yield amounted to 39.4 per cent in 1966.
- (5) Oil equivalent of sunflower seed: used 33 per cent as conversion factor. Sunflower seed production includes substantial part of birdseed and confectionary varieties.
- (6) Includes only edible vegetable oils produced domestically.
- (7) The animal fat total includes the oil equivalent of butter, but not total domestic milk fat production.
- (8) Salmon and redfish oil suitable for human consumption could not be broken out statistically and small amounts are probably included under "Marine Oils" in the inedible section, which consists mainly of offal oils and sun-rotted liver oils.
- (9) Includes white grease, neatsfoot oil, oleo oil, oleo stearin, oleo stock, etc.
- (10) Excludes oil equivalent of flaxseed, for which a conversion factor of 35.4 per cent had been used.

TABLE 2
Canadian Imports of Flats and Oils
(thousands of pounds)

	1963	1964	1965	1966
<u>Primarily Edible</u>				
<u>Vegetable Oils:</u>				
Soybeans (oil, equivalent)	150,500	194,200	168,500	168,000
Soybean oil	29,613	34,505	29,946	24,342
Cottonseed oil	38,528	37,422	47,646	32,225
Corn oil	(1)	17,067	14,377	20,308
Peanut oil	18,580	9,647	9,247	31,555
Coconut oil	37,845	39,750	39,618	42,641
Palm oil	25,483	13,112	18,913	26,761
Palm kernel oil	8,080	7,327	9,877	9,182
Olive oil	1,912	3,705	2,731	3,371
Cocoa butter	11,766	13,157	13,185	15,545
Vegetable Oils and Flats ⁽²⁾	28,429	5,256	7,488	38,644
<u>Vegetable Cooking Fats and Pack</u>				
Salad Oils	(3)	4,143	9,254	7,714
Margarine and Shortening	4,447	5,129	3,526	4,496
Total ⁽⁴⁾	355,173	384,420	374,308	424,804
<u>Animal Fats:</u>				
Lard	17,133	16,001	20,734	28,439
Butter (oil equivalent)	—	—	1,350	18,950
Total	17,133	16,001	22,084	47,389
<u>Marine Oils:</u>				
Fish and Marine Animal oil ⁽⁵⁾	24,165	980	7,981	10,078
Whale and Spermaceti	648	(6)	(6)	(6)
Total	24,813	980	7,981	10,078
Total Edible Oils and Fats	397,119	401,401	404,373	482,271
<u>Primarily Inedible</u>				
Flaxseed (oil equivalent)	21	1,290	123	24
Linseed oil	110	—	—	—
Castor oil	5,948	5,438	6,778	4,627
Oiticica oil	448	246	204	149
Tug oil	2,217	2,860	2,142	2,508
Inedible tallow ⁽⁷⁾	5,247	8,680	8,007	7,002
Animal oils and fats	3,224	1,337	771	804
Grease ⁽⁸⁾	29,877	23,589	15,308	10,356
Fish liver and visceral oil	1,039	105	261	130
Total Inedible Oils and Fats	48,131	43,545	33,594	25,600
Total Edible and Inedible				
Fats and Oils Imports	445,250	444,946	437,967	507,871

Source: Based on DBS Data.

- (1) Corn oil was listed with other oils until 1963, and listed separately starting in 1964.
- (2) This class included corn oil and refined salad oils until 1963.
Sunflowerseed oil and rapeseed oil accounted for the bulk of the volume in 1966.
- (3) Listed under Vegetable Oils and Fats until 1963.
- (4) Vegetable oil total includes the oil equivalent of imported soybeans.
- (5) Includes Icelandic herring oil and menhaden oil; and also whale oil starting in 1964.
- (6) Included under Fish and Marine Animal Oil starting in 1964.
- (7) This class probably includes some edible tallow.
- (8) Grease, including wool grease and lanolin.

TABLE 3
Canadian Exports of Fats and Oils
(thousands of pounds)

	1963	1964	1965	1966
<u>Primarily Edible</u>				
<u>Vegetable Oils:</u>				
Soybeans (oil equivalent).....	17,280	20,400	32,200	34,800
Soybean oil.....	45,373	25,017	34,727	29,194
Rapeseed (oil equivalent).....	116,400	68,200	199,500	261,500
Rapeseed oil.....	122	391	5	—
Sunflowerseed (oil equivalent).....	4,720	3,460	4,540	6,200
Margarine and shortening.....	121	104	168	228 ⁽¹⁾
Vegetable Oils and Fats.....	2,283	458	677	543
Total ⁽²⁾	186,299	118,030	271,817	332,465
<u>Animal Fats:</u>				
Lard.....	23	34	31	(1)
Butter (oil equivalent) ⁽³⁾	4,540	29,600	2,370	1,300
Total.....	4,563	29,634	2,401	1,300
<u>Marine Oils:</u>				
Herring oil.....	947	23,291	7,578	790
Whale oil.....	4,918	3,161	4,526	1,425
Total.....	5,865	26,452	12,104	2,215
Total Edible Fats and Oils (including oil equivalents of oil seeds)	196,727	174,116	286,322	335,980
<u>Primarily Inedible</u>				
Flaxseed (oil equivalent).....	229,000	294,000	319,000	400,000
Linseed oil.....	8,039	18,996	22,518	12,359
Inedible tallow.....	108,233	137,872	135,564	136,308
Marine oils ⁽³⁾	11,361	8,240	7,589	6,687
Animal Fats and oils.....	171	159	129	5,110
Total Inedible Fats and Oils ⁽²⁾	356,804	459,267	484,800	560,464
Total Edible and Inedible Fats and Oils..	553,531	633,383	771,122	896,444

Source: Based on DBS data.

- (1) Starting in 1966 lard exports are included with margarine and shortening export data.
- (2) Oil equivalents of oilseeds are included in all totals.
- (3) Butter exports have been converted to butter oil equivalents at 81 per cent. More than 75 per cent of the butter exports were destined for St. Pierre and Miquelon in 1966. Substantial amounts of butter oil exports to Great Britain from surplus stocks in 1964 have not been included. Re-exports of butter to the United States of stocks purchased in the Netherlands in 1966, have not been included. This butter was further processed in Canada with the addition of sugar and subsequently exported to the United States as a different product in another export class.
- (4) Exports of marine oils listed as inedible oils, include sun-rotted cod liver oil, fish and marine animal oil, fish liver and visceral oils. A part of these oils can be assumed to be of feed grade, and even some edible oil may have been included.

WORLD FATS AND OILS REVIEW

Survey of World Oils and Fats Market

by

C. A. C. de Boinville

President

International Association of Seed Crushers

Depending on the source, estimates concerning the expected surplus of fats and oils on the world market in 1967/68 diverge widely. All observers, however, agree that the expected surplus will depress prices – provided that present consumption trends continue.

Tables 4, 5 and 6 reflect authoritative estimates of the world production of fats and oils as well as of the exports of fats, oils and protein meals.

The following are comments on the world situation presented by Mr. C. A. C. de Boinville at the June 1967 Congress of the International Association of Seed Crushers in Brussels, Belgium:

At last year's Congress I referred to the shortage of oils and fats in Europe in 1965 and the resultant high level of prices, the highest since the Korean War boom in 1950/51. I predicted that the supply situation, which already showed signs of easing, would ease further over the succeeding twelve months. This, as you all know, has proved true and this year has seen a sizeable surplus of supplies in contrast to the shortages which were experienced a year or two ago. The main feature, therefore, of the world market since June last year, has been the sharp drop in prices. Indeed, for those of you who like statistics, the overall level of oils and fats prices has in recent months been at its lowest point, with the exception of 1962/63, since the end of the Second World War. In the first half of this year the price has been 14% below last year.

Why has this surplus come about?

Two developments together have accounted for an additional half million tons of products available for export this year. i) In 1966 Russia harvested an exceptionally large sunflower-seed crop – a crop of 6.1 million tons. I think they would agree that a more normal level is around 5.2 million tons. This crop, together with better crops generally in Eastern Europe, has added about 350,000 tons of sunflower oil to the quantity available for export. There has been a swing over the last three years in the U.S.S.R./Eastern European Zone from being net importers of oils and fats to being significant net exporters. Ten years ago only 17,000 tons of sunflower oil equivalent were exported from this zone compared to a probable 400,000 tons this year. This tremendous change around will bring obvious repercussions on the world market. ii) The second development has been the dramatic rise in Norwegian fish oil production. For the calendar year 1966, their production was three times greater than in 1964 and in 1967 a further increase has occurred. Across the world from Norway, their main rival, Peru, has exported more fish oil in the first quarter of 1967 than it shipped during the whole of 1966. Naturally the result has been a depression of fish oil prices to low levels, and now, too, there appear to be problems of disposal of the meal.

These two developments have hit the U.S.A. hard. There has been a decline in U.S. oil prices and in "free dollar" oil exports which have become less competitive on world markets. Total U.S. oil production will decline this season largely as a result of a drop in production of 300,000 tons of cotton oil.

Demand for PL480 oil, especially from India, Pakistan and Yugoslavia, has been heavier than last year. In fact, with the decline in commercial demand, PL480 shipments are likely to account for nearly 75% of U.S. exports this year.

Whale oil, once again, has not played a significant part in world oils and fats markets. However, there may be an interesting development arising from the decline of the whale population. It is reported that one of the Russian whaling fleets has been equipped with special gear to fish for krill – the shrimp-like crustaceans on which the whales feed. It is said that the Russians are turning the krill mainly into fishpaste on a pilot scale, but that there are vast possibilities for krill oil and krill meal. Fishery experts have long known about this potential raw material but considered that it would be 20 years or more before it could be tapped. Now the Russians are showing the world that this source of fresh material is not so remote. It is an exciting prospect for a world that desperately will require all that man's ingenuity can provide to keep its 6,000 million people alive by the end of this century.

What of the immediate future? Early indications point towards an ample supply of oils and fats in the coming year. Let me touch briefly on news from a few sources.

In the U.S. there is likely to be an end of season stock approaching 100 million bushels of soybeans. And it may well be that that magical 1,000 million bushels mark may be reached in this year's harvest. Although there has been no increase in the support price, farmers have announced their intention to increase acreages by 9% and yields per acre, which average 25 bushels at present, are bound to go up and up. When I was in Illinois last October, I heard stories of farms where 75 to 100 bushels of beans were being obtained per acre. So much will depend as usual on the weather – given favourable weather we can expect the 1,000 million bushel break-through!

In Argentina the sunflowerseed crop harvested recently has been estimated at close on a million tons, or 50% above the last five-year average.

In Brazil they expect oilseed crops to increase between 25% and 50% over last year.

In the Philippines copra production, which has fallen so far this year, is expected to resume an upward trend, as a result of new trees coming into production and a better rainfall.

In Malaya – now the largest single exporter of palm oil – it is expected that new plantings now coming into production will enable them to increase exports.

In Nigeria they are expecting to achieve for the first time the milestone of a million-ton groundnut crop. The problem here will be transportation.

In Peru it is impossible to forecast, as this year's greatly increased production of fish oil was due to fatter anchovies being caught.

In Canada in 1966 rapeseed exports at 360,000 tons were over half the world total and have made this country in ten years the world's leading exporter of rapeseed. This year, given good conditions, an even bigger crop is expected.

In Europe they expect record rapeseed crops and, if weather permits, presumably we can expect further crops of sunflowerseed from Eastern Europe and the U.S.S.R.

We cannot leave oils and fats supplies without reference to their byproducts – oilcakes and meals. From 1962 to 1966 world supplies of oilcake and meal (including fish meal) rose by nearly 30%, but such was the buoyancy of demand for proteins, that prices ended that period some 30% higher than in 1962.

This year there has been a decline in price due mainly to two factors: one I have already mentioned – a surplus of Norwegian and Peruvian fishmeal; the second, a mild European winter and lower livestock prices in the United States and Western Europe. Soymeal prices were affected by surplus supplies of other meals and have dropped from \$86 last December to around \$70 currently.

I am absolutely convinced, however, that our problem will be, in the long-term, a world wide shortage of proteins resulting in a higher level of prices eventually. There is bound to be an impressive increase in livestock production and in the development of intensive feeding in the coming years.

TABLE 4
Estimated World Production of Fats and Oils
(Oil or fat equivalent)
(thousands of tons)

Commodity	Average 1955-59	1960	1961	1962	1963	1964	1965	1966(2)	Forecast 1967
Edible Vegetable Oils(3)									
Cottonseed.....	2,081	2,280	2,305	2,430	2,490	2,610	2,715	2,695	2,550
Peanut	2,605	2,560	2,725	2,855	2,985	3,100	3,285	3,115	3,155
Soybean	3,024	3,815	3,660	4,020	4,195	4,270	4,500	4,960	5,380
Sunflowerseed	1,422	1,575	1,990	2,190	2,545	2,285	2,910	2,795	3,100
Rapeseed	1,209	1,280	1,320	1,300	1,190	1,230	1,665	1,490	1,585
Sesameseed	590	590	530	585	590	600	605	565	615
Sunflowerseed	89	125	140	155	220	235	205	220	290
Olive Oil	1,091(4)	1,300	1,480	1,475	1,020	1,875	1,080	1,330	1,420
Corn Oil.....	170	195	210	225	240	255	270	265	275
Totals	12,281	13,720	14,360	15,235	15,475	16,460	17,235	17,435	18,370
Palm Oils (5)									
Coconut.....	2,286	2,240	2,395	2,325	2,420	2,435	2,360	2,475	2,400
Palm Kernel.....	464	455	440	405	410	420	405	415	425
Palm.....	1,394	1,455	1,410	1,365	1,390	1,400	1,405	1,410	1,420
Babassu Kernel(6)	51	64	57	66	50	66	70	85	85
Totals.....	4,195	4,214	4,302	4,161	4,270	4,321	4,240	4,385	4,330
Industrial Oils(3)									
Linseed	1,138	1,075	1,110	1,080	1,150	1,190	1,150	1,210	1,060
Castorbean.....	235	295	265	295	320	390	320	295	330
Oiticica	9	22	18	28	6	19	22	24	25
Tung.....	128	136	120	108	103	123	130	109	147
Totals.....	1,510	1,528	1,513	1,511	1,579	1,722	1,622	1,638	1,562
Animal Fats									
Butter (fat content)....	4,014	4,250	4,295	4,375	4,375	4,455	4,615	4,660	4,780
Lard(7)	3,727	4,000	4,045	4,085	4,065	3,845	3,940	4,000	4,020
Tallow and Grease	3,243	3,440	3,640	3,745	4,085	4,405	4,285	4,285	4,350
Totals.....	10,984	11,690	11,980	12,205	12,525	12,705	12,840	12,945	13,150
Marine Oils									
Whale	427	418	428	390	295	249	218	175	155
Sperm Whale.....	119	122	120	130	149	165	170	170	175
Fish (including liver)..	427	512	662	734	684	836	875	935	940
Totals.....	973	1,052	1,210	1,254	1,128	1,250	1,263	1,280	1,270
Estimated World									
Totals.....	29,943	32,204	33,365	34,366	34,977	36,458	37,200	37,683	38,682

- (1) Years indicated are those in which the predominant share of the given oil or fat was produced from its related raw material.
- (2) Preliminary. (3) Estimates of U.S. oil production include actual oil produced plus the oil equivalent of exported oilseeds; estimates for other countries are based upon the production of various oilseeds times the estimated normal proportions crushed for oil. (4) 1955-58 average. (5) Estimated on the basis of exports and information available on consumption in the various producing areas. (6) Figures for 1960-67 represent mill production only. (7) Rendered lard only in most countries.

Source: USDA, January 1967.

TABLE 5
World Net Exports of Oilseeds, Oils and Fats, Primarily for Food
(thousands of short tons)

<u>Edible Vegetable</u>	1963	1964	1965	1966
Soybeans	5,769	6,922	7,592	8,192
Soybean oil	561	650	615	440
Total, as oil	1,600	1,895	1,981	1,914
Cottonseed	539	386	462	407
Cottonseed oil	218	358	342	172
Total, as oil	304	421	417	237
Peanuts	1,613	1,586	1,437	1,586
Peanut oil	364	385	410	458
Total, as oil	1,073	1,082	1,043	1,156
Rapeseed	321	335	594	668
Rapeseed oil	26	25	71	114
Total, as oil	151	157	302	374
Sunflowerseed	212	338	279	335
Sunflower oil	357	250	331	464
Total, as oil	429	380	438	592
Sesame	181	191	158	171
Sesame, as oil	85	89	74	80
Olive oil	164	203	119	184
Totals: seed	8,634	9,757	10,522	11,358
veg. oils	1,691	1,871	1,886	1,832
Combined, as oil	3,806	4,227	4,373	4,537

TABLE 5 (Conc.)

World Net Exports of Oilseeds, Oils and Fats, Primarily for Food

(thousands of short tons)

<u>Palm</u>				
Copra	1,624	1,547	1,547	1,583
Coconut oil	421	468	435	512
<hr/>				
Total, as oil	1,460	1,452	1,427	1,525
<hr/>				
Palm kernels	756	732	711	681
Palm kernel oil	46	56	62	94
<hr/>				
Total, as oil	401	400	396	413
<hr/>				
Palm oil	574	614	589	613
<hr/>				
Totals: seed	2,380	2,279	2,258	2,264
veg. oils	1,041	1,132	1,086	1,219
Combined, as oil	2,435	2,466	2,411	2,551
<hr/>				
<u>Animal fats, edible</u>				
Butter (82%)	579	577	540	559
Lard (1)	443	510	321	299
<hr/>				
Total	1,022	1,090	861	857
<hr/>				
<u>Marine oils, edible</u>				
Whale oil (production)	294	249	218	138
Fish oils	452	429	496	561
<hr/>				
Total	746	678	714	699
<hr/>				
<u>World Totals</u>				
Oilseeds (actual weight)	11,015	12,036	12,780	13,622
Veg. oils	2,732	3,003	2,972	3,050
Animal and marine	1,768	1,768	1,575	1,556
<hr/>				
Grand total (oil basis)	8,009	8,461	8,359	8,644

(1) Includes negligible amounts of edible tallow.

Source: Courtesy of Oil World, Hamburg.

TABLE 6

World Net Exports of Oilseed Cake and Meal, and Fish Meal

(thousands of short tons)

	1965				1966			
	Seed (1)	Meal	Total	Protein (2)	Seed (1)	Meal	Total	Protein (2)
Soybean	5,998	2,321	8,319	3,827	6,472	2,690	9,162	4,214
Cottonseed	319	1,289	1,608	659	281	1,299	1,580	648
Peanut	805	1,495	2,300	1,196	888	1,600	2,488	1,294
Rapeseed	338	80	419	151	380	122	503	181
Sunflowerseed	166	384	540	200	201	600	800	296
Sesame	82	46	128	51	89	43	132	53
Copra	541	412	953	209	554	413	968	213
Palm kernel	369	110	479	86	354	153	507	92
Linseed	399	790	1,189	428	526	573	1,099	396
Unspecified(3)	209(4)	343	552	180	198(4)	365	563	182
Total	9,226	7,261	16,487	6,986	9,943	7,858	17,802	7,567
Fish meal	—	2,387	2,387	1,552	—	2,646	2,646	1,720
Grand Total	9,226	9,648	18,874	8,537	9,943	10,504	20,448	9,288

(1) Oilcake equivalents of oilseed net exports.

(2) Average raw protein content of oilcake expeller meal.

(3) Except castor bean.

(4) Mainly safflowerseed.

Source: Courtesy of Oil World, Hamburg.

TABLE 7
Canadian Crashings of Vegetable Oilseeds
and Production of Meal and Oil

(millions of pounds)

	1962	1963	1964	1965	1966	August — April 1965/66	1966/67
<u>Crushings</u>							
Flaxseed	132	135	171	159	138	113	108
Soybeans	1,046	1,089	1,158	1,173	1,203	929	861
Rapeseed	75	80	87	132	214	139	191
Sunflowerseed	3	7	21	20	12	9.9	10.4
Total	1,256	1,311	1,437	1,484	1,567	1,171	1,170
<u>Oil Production</u>							
Flaxseed	45	47	59	55	49	39	38
Soybeans	181	187	200	199	198	154	144
Rapeseed	28	31	34	52	84	54	76
Sunflowerseed	0.9	2.4	6.7	6.7	4.4	3.4	4.2
Total	225	267	300	313	335	250	262
<u>Meal Production</u>							
Flaxseed	81.4	82.5	106.9	97.5	85.0	68.8	66.2
Soybeans	815	855	917	932	950	737.3	684.5
Rapeseed	45.4	47.2	51.2	76.5	122.8	80.0	109.9
Sunflowerseed	1.0	2.4	7.1	7.3	4.6	3.8	4.0
Total	943	987	1,082	1,113	1,162	889.9	864.6

Source: DBS Cat. #22-001

Comments to Table 7

The total volume of oilseed crushings increased by 5.5% from 1,484 million pounds in 1965 to 1,567 million pounds in 1966. Since the total Canadian crushing capacity grew to a similar extent during this period, its utilization remained at the same level. Plant expansions carried out or planned in 1967 may lower the rate of utilization.

Flaxseed crushing continued its decline, dropping by 13% during this period.

Soybean crushing increased by less than 3% in 1966. However, a comparison of the first nine months of the crop year 1966/67 with 1965/66 shows a decrease of 68 million pounds (1.1 million bushels). A lowering of the export demand for the meal and competition from other vegetable oils are the principal causes.

Rapeseed crushing grew by 62% from 132 million pounds in 1965 to 214 million pounds in 1966. While the rate of growth has slowed down during the crop year 1966/67, increased rapeseed crushing is expected both in Western and Eastern Canada as a result of plant expansions, favorable economic circumstances and improved acceptability of the products. It will be interesting to observe whether the next two years will support and justify present indications for a further substantial increase in rapeseed crushing in Canada.

Based on the calendar year, sunflowerseed crushing dropped significantly during 1966 compared with 1965. On a crop year basis it remained at the same level, which reflects more accurately the maintenance of the level of supply.

While linseed oil production declined again in 1966, Canadian output of crude edible vegetable oils rose by 11% from 258 million pounds in 1965 to 286 million pounds in 1966. A comparison with the 406 million pounds of refined vegetable oils (Table 63) consumed in the production of various edible oil products indicates the extent to which the demand can now be met by domestic supply.

Soybean oil production in 1966 remained at the same level as in 1965, however, a comparison of similar 9-month periods of the crop year 1965/66 and 1966/67 shows a distinct reduction in soybean oil output.

Rapeseed oil production rose strikingly from 52 million pounds in 1965 to 84 million pounds in 1966, and is expected to reach 100 million pounds during the crop year 1966/67, accounting for at least 34% of the output of edible oils by Canadian mills.

Sunflower oil production remained at a low level. Since sunflower seed acreage is not likely to expand greatly in 1967, the relative importance of domestically produced sunflower oil will not change within the next year.

Oilseed meal production grew by 4% from 1,113 million pounds in 1965 to 1,162 million pounds in 1966. While soybean meal accounts for 82% of oilseed meal production, the share held by rapeseed meal rose to 10.5% in 1966 from 6.9% in 1965, and it continues to grow.

The following compilation indicates the trends in oil and meal yields during the past three years, as based on the data in Table 7.

Oil and Meal Yields
(percentage)

	1964		1965		1966	
	Meal	Oil	Meal	Oil	Meal	Oil
Flaxseed	62.6	35.1	61.3	34.5	61.6	35.2
Soybeans	79.2	17.3	79.4	16.9	79.0	16.5
Rapeseed	58.9	39.2	58.0	39.3	57.4	39.4
Sunflowerseed	33.8	32.0	36.5	33.5	38.3	36.4

Soybean oil yields have been low, possibly due to fluctuation in bean quality. Improved sunflower meal and oil yields are mainly the result of the introduction of new seed varieties with lower hull content.

TABLE 8
Preliminary Estimate of High Protein Feed Supplies
Available in Canada in 1966

(thousands of tons)

<u>Item</u>	1963	1964	1965	1966 (preliminary)
Linseed meal	29	38	26	27
Soybean meal	443	452	460	479
Rapeseed meal	23	25	36	60
Other oilseed meals, gluten feed ⁽¹⁾	56	64	64	61
Brewers & distillers dried grains & malt sprouts.	<u>109</u>	<u>112</u>	<u>112</u>	<u>113</u>
Total Vegetable Protein	660	691	697 ⁽²⁾	739
Fish meal	38	23	43	40
Packinghouse byproducts	137	167	195 ⁽²⁾	193
Skim milk, buttermilk & whey powders	<u>19</u>	<u>19</u>	<u>19⁽²⁾</u>	<u>19</u>
Total Animal Protein	<u>194</u>	<u>208</u>	<u>256</u>	<u>252</u>
Total Protein Supplies	854	899	953	991

(1) Other oilseed meals include sunflowerseed, cottonseed, and n.e.s.

(2) Preliminary and partly estimated.

Source: DBS Catalogue No. 22-001

SOYBEANS, SOYBEAN OIL, SOYBEAN MEAL

The Canadian Soybean Outlook

Soybean imports in 1966 amounted to 475,219 tons, (15.8 million bushels) remaining at the same level as in 1965. Soybean exports continued growing in 1966, amounting to 98,272 tons (3.3 million bushels) with 96% destined for the British market. Assuming an average of 8.3 million bushels for the crops harvested in 1965 and 1966, domestic beans could have accounted for not more than 4.5 million bushels of the total crushings of slightly more than 20 million bushels in 1966.

The estimated acreage in 1967 may be slightly reduced to 265,000 acres from 268,000 acres in 1966. If previous yields are maintained, the crop will again be somewhat above eight million bushels.

Following a record high average price of \$3.62 per bushel in July, 1966, soybean prices have dropped in relation to corresponding United States prices, and have ranged around the \$3.00 level during the half of 1967. Oil prices dropped sharply in September, 1966, by about 3¢ to 14¢ per pound and remained steady at about 13¢ for the first five months of 1967. Large United States soybean oil supplies and the indication of a one billion bushel harvest combined with the import of European rapeseed and sunflower oils at very competitive prices will reduce the soybean oil price to about 12¢ per pound by early July, 1967.

In June, 1967, Mr. J. C. Henderson, vice-president of Victory Soya Mills, Toronto, made the following comments on the Canadian soybean industry in an address to the annual congress of the International Association of Seed Crushers in Brussels, Belgium:

"The possibility for expansion of soybean growing has until now been limited. It is the opinion of leading agronomists that with the advent of weed control through the usage of chemical sprays, soybeans can be planted solid like grain, rather than in rows. With new bean varieties requiring a shorter growing season, a great deal larger area can be planted in soybeans in the near future, and could easily double or triple our present annual production of some 220,000 metric tons. At present Canada imports a considerable quantity of beans from the U.S.A. Crushing is primarily concentrated in Ontario, partially because this is where the crop is grown; also, a major portion of the oil refining capacity, along with almost two-thirds of the population of Canada, is concentrated in Ontario and to the east through Quebec. Other reasons are the crushers' ability to move United States beans into their plants by water transport, as well as the poultry and livestock industry being nowhere larger than in these two provinces. However, while a large market exists for protein meals in Western Canada, the cost of transporting meals from Ontario crushing plants to these areas far exceeds the costs of moving meals from the United States mid-west crushing locations. As there is no duty on meal entering Canada; the Ontario crusher is unable to compete in this Western market. Canadian crushers, therefore, turn to the export market with their surplus meal and the Western feed compounders import their requirements, which in tonnage, curiously just about balance.

"With close to 550,000 metric tons of soybeans being crushed annually, Canada imports large quantities, all of which currently come from the U.S.A. This puts the Canadian crusher on a United States basis for his cost and obviously on a similar basis for pricing the end products. However, the Canadian

crusher does not enjoy the same duty protection afforded the United States crusher, which is presently 45% on oil and \$6 a short ton on meal, so with these lower world prices on oils and meals, we in the soybean crushing industry in Canada are far from happy."

Canadian imports and exports of both soybean oil and meal in 1966 underwent declines ranging from 14% to 19% compared with 1965. While virtually all soybean oil and meal imports came from the United States, the exports nearly all went to Great Britain, as in previous years. Some of the oil exports are said to have been necessitated by competitive vegetable oil imports.

The total Canadian supply of soybean oil dropped by 6.5 million pounds to 228.5 million pounds in 1966 from 235 million pounds in 1965. The apparent domestic disappearance dropped by only 2.1 million pounds to 191.9 million pounds during the same period. Since complete usage data for soybean oil for previous years are not available, it is not possible to draw quantitative conclusions on consumption trends in various products.

Soybean meal supply decreased by 31,900 tons in 1966 to 703,000 tons as a result of smaller imports. However, lower exports increased the apparent domestic disappearance from 466,700 tons in 1965 to 486,100 tons in 1966.

The trend established in soybean meal imports, Table 15, deserves careful analysis. While total imports dropped by about 34,000 tons, from 249,000 tons in 1965 to 215,000 tons in 1966, largely as a result of a 28% decrease in Ontario and Quebec by 54,000 tons to 141,000 tons, imports into Western Canada grew by more than 19,000 tons to 72,000 tons during the same period. Western Canada's soybean meal imports thus grew from 21% of the total in 1965 to 33% in 1966.

It can also be assumed that at least 50%, of the 61,000 tons of rapeseed meal produced in Western Canada in 1966 was consumed locally.

The developments in the livestock industry may help to explain the increased consumption of oilseed protein in Western Canada:

a) Cattle: The 1966 total as a percentage of the 1965 total on farms actually declined by four per cent. A shift to feedlot operations may, however, have led to increased demand for meals.

b) Hogs: The population on December 1, 1966 was 17% above that of December 1, 1965, and more meal would therefore have been consumed.

c) Poultry: The total poultry population increased only by a small percentage in Western Canada during 1966.

TABLE 9

Canadian Supply and Disposition of Soybean Oil and Meal

(millions of pounds)

	1962	1963	1964	1965	1966
<u>Soybean Oil</u>					
Stocks, starting	12.2	5.5	7.3	6.5	6.3
Production	181.3	186.8	200.3	198.6	197.9
Imports	19.3	29.6	34.5	29.9	24.3
Supply	212.8	221.9	242.1	235.0	228.5
Exports	50.6	45.4	25.0	34.7	29.2
Stocks, Dec. 31	5.5	7.3	6.5	6.3	7.4
Apparent Domestic Disappearance	156.7	169.2	210.6	194.0	191.9

(thousands of tons)

	1962	1963	1964	1965	1966
<u>Soybean Meal</u>					
Stocks, starting	6.6	11.4	10.1	19.3	12.4
Production	407.7	427.4	458.5	466.6	475.8
Imports	275.6	256.8	222.9	249.0	214.8
Supply	689.9	695.6	691.5	734.9	703.0
Exports	218.1	241.3	229.3	255.8	211.8
Stocks, Dec. 31	11.4	10.1	19.3	12.4	5.1
Apparent Domestic Disappearance	460.4	444.2	442.9	466.7	486.1

Source: Based on DBS data

TABLE 10**Canadian Soybean Prices⁽¹⁾**

(crop year)

(cents and eighths per bushel)

	1962-63	1963-64	1964-65	1965-66	1966-67
August.....	242/5	275	276	283/6	339/2
September.....	248/2	281/6	298/2	272/7	325/3
October.....	252/1	207/1	303/6	273/4	310/4
November.....	255/2	295/3	312/7	264/1	305/5
December.....	256/4	292/1	318/3	283/3	303
January.....	269/1	288	324/1	298/5	296/6
February.....	276/1	276/4	328/6	302/7	295/1
March.....	275/1	275/3	322/1	297/4	298/5
April.....	273	272	320/1	309/5	298/4
May.....	276/6	267/3	302/5	321/7	
June.....	283/3	265/6	312/2	346/6	
July.....	281/7	266/7	304/3	362/1	
Yearly average.....	265/7	279/3	310/4	301/2	

(1) Buying prices, carlots, f.o.b. Chatham.

Source: DBS No. 22-001.

TABLE 11**Canadian Imports of Soybeans**

(tons)

<u>Country of Origin</u>	1962	1963	1964	1965	1966
Hong Kong.....	7	4	5	7	6
United States.....	<u>418,000</u>	<u>425,738</u>	<u>548,326</u>	<u>476,255</u>	<u>475,213</u>
Total.....	418,007	425,742	548,331	476,262	475,219
Total Value (thousands of \$).....	37,340	41,094	52,899	46,327	52,438

Source: DBS, Trade of Canada

TABLE 12

Canadian Export of Soybeans

<u>Destination</u>	(tons)				
	1962	1963	1964	1965	1966
United Kingdom	78,674	47,122	56,547	82,521	94,006
Denmark	—	—	—	—	22
West Germany	3,296	1,461	1,120	4,535	2,285
Sweden	—	—	1	33	44
Switzerland	—	88	33	45	—
Rep. of South Africa	—	—	—	198	279
United States	—	—	—	1	13
Netherlands	—	—	—	—	1,623
Australia	—	56	—	—	—
Total (tons)	81,970	48,727	57,702	91,032	98,272
Total (millions of bushels)	2.7	1.6	1.9	3.1	3.3
Total Value (thousands of \$)	7,704	4,979	5,767	9,954	10,906

Source: DBS, Trade of Canada

TABLE 13

Canadian Imports of Soybean Oil

<u>Country of Origin</u>	(thousands of pounds)				
	1962	1963	1964	1965	1966
Germany, West	—	—	—	—	101
United States	19,302	29,613	34,505	29,946	24,241
Total	19,302	29,613	34,505	29,946	24,342
Total Value (thousands of \$)	2,251	3,435	3,822	4,104	3,398

Source: DBS, Trade of Canada

TABLE 14

Canadian Exports of Soybean Oil

(thousands of pounds)

<u>Destination</u>	1962	1963	1964	1965	1966
United Kingdom	44,961	45,372	25,016	33,728	29,191
Netherlands	—	—	—	1,447	—
Peru	—	1	1	2	3
United States	60	—	—	—	—
Spain	5,605	—	—	—	—
Total	50,625	45,373	25,017	34,727	29,194
Total Value (thousands of \$)	5,260	4,969	3,047	4,704	3,728

Source: DBS, Trade of Canada

TABLE 15

Imports of Soybean Meal by Province

(calendar year)

	1963		1964		1965		1966	
	Tons	Thousands of \$	Tons	Thousands of \$	Tons	Thousands of \$	Tons	Thousands of \$
Nfld.	—	—	95	9	30	2	70	8
N.S.	2,380	210	160	14	175	14	1,124	109
P.E.I.	—	—	150	15	215	19	141	14
N.B.	860	69	935	72	870	73	685	69
Que.	83,080	6,605	58,220	4,520	80,185	6,568	57,730	5,540
Ont.	118,670	9,376	112,910	8,711	114,800	9,515	83,049	7,992
Man.	27,545	2,290	29,530	2,388	30,680	2,584	35,693	3,326
Sask.	490	42	375	32	640	58	4,000	368
Alta.	4,475	379	5,500	463	6,145	533	9,911	953
B.C.	19,325	1,640	15,040	1,220	15,250	1,350	22,432	2,122
Total	256,825	20,611	222,915	17,444	248,990	20,716	214,835	20,500

Source: DBS.

TABLE 16
Canadian Exports of Soybean Oil Cake & Meal

<u>Destination</u>	(tons)				
	1962	1963	1964	1965	1966
United Kingdom	212,500	241,145	216,688	247,747	210,714
Australia	—	—	—	6,391	442
Barbados	60	60	90	60	240
Leew.-Wind. Is.	—	—	—	2	16
Trinidad — Tobago	—	—	15	106	70
Cuba	5,275	—	12,493	1,255	328
United States	57	34	43	196	—
British Guiana	—	—	1	—	—
Venezuela	—	100	—	—	—
Ireland	168	—	—	—	—
New Zealand	4	—	—	—	—
Bermuda	2	—	—	—	—
Total	218,067	241,340	229,329	255,756	211,810
Total value (thousand \$)	18,024	21,923	21,075	24,270	20,267

Source: DBS

TABLE 17
Canadian Imports of Miscellaneous Oilseed Cake & Meals

	(tons)				
	1962	1963	1964	1965	1966
Cottonseed Meal	401	939	2,917	4,420	1,873
Oilseed Cake & Meal, N.E.S.	246	165	50	73	140
Total	647	1,104	2,967	4,493	2,013
Total value (thousand \$)	56	90	235	358	176

Source: DBS, Trade of Canada

TABLE 18
Canadian Exports of Oilseed Cakes and Meals

(short tons)					
<u>Destination</u>	1962	1963	1964	1965	1966
United Kingdom	—	—	1,114	3,539	2,734
Japan	530	1,102	—	—	—
Guiana	1	—	2	13	—
Trinidad	33	—	93	159	—
United States	—	1	20	13	26
Leew. Wind. Is.	—	—	1	37	—
Denmark	—	—	—	33	—
Barbados	—	—	—	5	—
Total	564	1,103	1,230	3,799	2,760
Total Value (thousands of \$).....	24	83	74	318	137

Source: DBS, Trade of Canada.

RAPESEED, RAPESEED OIL, RAPESEED MEAL

The Canadian Rapeseed Situation of 1966

Prices and Trade

The record 1966 crop of 25.5 million bushels appeared at a time when the market for rapeseed looked very promising. Prices, (see Table 19) declined slightly from the high of about \$2.90 per bushel in August 1966 to \$2.66 in October. In the course of the winter 1966/67, rapeseed prices remained at a high level and started to drop only in the summer of 1967, largely in response to the increased pressure from the supply of American soybeans and Soviet sunflowerseed and oil. In late summer 1967 rapeseed prices declined to \$2.50 per bushel.

Rapeseed exports continued their growth (Table 20) by a 31% increase from 266,000 tons in 1965 to 349,000 tons in 1966. Japan's share grew to 194,000 tons, or 56% of the total, with the bulk of the remainder being taken by Italy, The Netherlands and West Germany.

According to West German statistics, that country imported 53,000 tons of rapeseed from Canada in 1966, and The Netherlands reported only 8,700 tons of total rapeseed imports. It must be assumed that more than 30,000 tons of Canadian rapeseed reported as exports to The Netherlands were actually transshipped to Germany. A somewhat similar situation existed in 1965 when German sources reported the importation of 37,200 tons of rapeseed from Canada, compared with 22,645 tons according to Canadian export data.

Italy increased her imports of Canadian rapeseed from 48,000 tons in 1965 to 60,000 tons in 1966. However, Canada's share of Italy's total rapeseed imports dropped, since these imports rose from 145,000 tons in 1965 to 230,000 tons in 1966. Since the 1966/67 olive oil production is expected to decline, Italy will have to rely on the importation of substitutes, Canada will face strong competition from rapeseed originating in E.E.C. countries and from East European sunflowerseed. Sunflower imports increased from 69,000 tons in 1965 to 135,000 tons in 1966.

United Kingdom imports of rapeseed rose from 8,800 tons in 1963 to 47,000 in 1966. Canada's exports of rapeseed to the United Kingdom declined from 9,000 tons in 1965 to 4,000 tons in 1966 because of strong competition from European exporters.

Canadian exports of rapeseed oil have dwindled to a point where they have become insignificant, and D.B.S. no longer lists them separately.

Preliminary Review of 1966/67 Crop Year: Rapeseed and Flaxseed

According to the Board of Grain Commissioners, Canadian farmers marketed 20.4 million bushels of rapeseed during the crop year 1966/67 compared with 18.8 million bushels during 1965/66. Export clearances rose from 13.6 million bushels (340,000 tons) in 1965/66 to 13.8 million bushels (345,000 tons) in 1966/67. Japan's share rose from 169,000 tons to 210,000 tons during the same period. Domestic crushing is reported to have increased from 3.9 million bushels in 1965/66 to 5. million bushels in 1966/67. This volume would correspond to a production of approximately 100 million pounds of rapeseed oil. The first estimate of the 1967 rapeseed harvest indicated a 25.6 million bushel crop grown on an acreage which had increased by 13% compared with the previous year.

**Preliminary Estimates of Rapeseed and Flaxseed
Crop Acreage**

	1966		1967	
	Rapeseed	Flaxseed	Rapeseed	Flaxseed
	(thousand acres)			
Manitoba.....	170	1,107	176	718
Saskatchewan.....	731	429	675	193
Alberta.....	624	347	875	171
Total Prairie Provinces	<u>1,525</u>	<u>1,883</u>	<u>1,726</u>	<u>1,082</u>

This would indicate a rapeseed yield decrease to 14.8 bushels per acre from 18.4 bushels the previous season.

The reduction in flaxseed acreage by 43 % from 1,883,000 acres to 1,082,000 acres has been most dramatic and indicates an adjustment to the smaller markets. D.B.S. estimates the total flaxseed harvest will reach only 10.3 million bushels in 1967 compared with 23.0 million bushels in 1966. The relatively low crop estimates show the effects of drought throughout most of Saskatchewan, southwestern Manitoba, southeastern Alberta and the Peace River District. Particularly hard hit are crops grown on stubble.

Summerfallow and Stubble

According to D.B.S. Field Crop reports, the proportion of all grain crops sown on summerfallowed land in the Prairie Provinces in 1966 declined compared with the previous year, except for rapeseed, which remained unchanged from 1965.

	Rapeseed			Flaxseed		
	Summerfallow	Stubble	Total	Summerfallow	Stubble	Total
Seeded Area						
Thousand Acres						
1960-64 Average	435	187	622	968	926	1,894
1965	803	632	1,435	758	1,507	2,265
1966	784	604	1,388	587	1,442	2,029
Distribution (%)						
1960-64 Average	70	30	100	51	49	100
1965	56	44	100	33	67	100
1966	56	44	100	29	71	100
Average Yield Per						
Seed Acre (bushels)						
1960-64 Average	17.9	18.9	22.0	10.6	8.5	9.6
1965	11.7	11.8	13.6	14.6	11.5	12.5
1966	16.0	15.7	18.4	16.0	9.4	11.3
Production						
Million bushels						
1960-64 Average	7.78	2.18	9.96	10.3	7.9	18.2
1965	15.17	7.43	22.60	11.1	17.3	28.4
1966	17.26	8.24	25.50	9.4	13.6	23.0

FOUNDATION OF THE RAPESEED ASSOCIATION OF CANADA

Winnipeg, March 14, 1967

More than 180 delegates from Quebec to British Columbia assembled in Winnipeg, Manitoba, on March 14-15, 1967 to discuss the establishment of an organization representing all the far-flung groups responsible for the development of rapeseed as Canada's major oilseed crop.

The proceedings were chaired most capably by Mr. A.M. Runciman, president of the United Grain Growers. He succeeded in conveying to the producers, to the traders, to the feed manufacturers, to the processors and to the edible oil refiners that they share a common problem: an unrealized growth potential of their industry which can be achieved if the following objectives are attained:

- 1) Improve the quality of the oil and yield of the oil.
- 2) Improve the quality of the meal.
- 3) Increase yield potential and other agronomic factors so producers can realize larger yields.
- 4) Increase sales of seed, oil and meal, both domestically and abroad.

Mr. James McAnsh and Mr. W.G. Malahar had, during many months of preparation, laid the basis for a successful conference.

The Honorable H. Enns, Manitoba Minister of Agriculture, welcomed the delegates and stressed the need for agricultural diversification.

Mr. Glenn H. Pogeler, President of The Soybean Council of America, delivered the keynote address entitled Aims, Objectives and Experiences of The Soybean Council of America.

Dr. B. Weinberg of the Department of Industry, Ottawa, reported on the Federal Department of Industry's efforts to promote the growth and efficiency of the domestic rapeseed processing industry, which are largely directed towards the greater acceptance of rapeseed oil and meal by their respective markets.

Mr. G.W. Neumann, Nipawin, Saskatchewan, spoke for the Western crushers and Mr. M.J. McDonald, Montreal, for the Eastern crushers. Mr. J.G. Cummings, Winnipeg, discussed the growing importance of rapeseed oil in the manufacture of margarine, shortening, salad and cooking oils, and outlined the areas where the new Association could assist in consolidating the market for rapeseed oil.

Mr. S.C. Roberts, president of the Manitoba Feed Manufacturers' Association, represented the feed manufacturers. He said that once the oversupply of vegetable oils is cleared up, the future of rapeseed in Canada will depend on the use of rapeseed meal as a feed supplement. Whether or not a feed manufacturer will include rapeseed meal into a formulation will depend on the following considerations and in the following order:

Quality

Cost

Availability

Mr. Roberts stated, "Rapeseed meal has a bright future as a valuable feed supplement and may very well in the near future totally replace soymeal as our vegetable protein for animal feeds. But in order for it to do so, we must honestly face the problems and the doubts present," He concluded that

the Rapeseed Association could surely put order into the growing, processing and marketing of rapeseed and rapeseed products. Equally important, it could co-ordinate the research for maximum benefits to all.

Mr. C.O. Swartz, Winnipeg, voiced the views of the exporters and shippers and had no difficulty in convincing his listeners of the fascinating, but also very complicated international market for rapeseed and its products. "Canada requires capital, knowledge and skill to develop our great potential" summarized the essence of Mr. Swartz's remarks.

Mr. R.A.V. Lester of the Vancouver Grain Exchange, as representative for the terminal and line elevators, stressed the problems involved in the efficient handling and moving of rapeseed in order that top-quality seed may reach our overseas customers.

Mr. J.E. McCannel, President of the Winnipeg Grain Exchange, discussed the role of the future market in establishing prices for rapeseed, and stated that it has brought considerable order and stability to the marketing of a rapidly increasing volume of Canadian rapeseed.

Mr. H.T. Armstrong of the Department of Trade and Commerce, Ottawa, discussed the opportunities of the international market for rapeseed and the many services offered by his Department for the expansion into new as well as established areas.

Mr. J.R. Blakely of Whittome, Saskatchewan, told the gathering of his experiences with rapeseed within the Western crop rotation system. He expects the Association to assist the farmer in tackling his weed problem. The Association should support research designed to develop improved rapeseed varieties. Mr. Blakely stressed that the Association should be representative of all segments of the industry.

Mr. O.G. Bratvold, Edmonton, Alberta, represented the Departments of Agriculture of the three Prairie provinces. He said that he represented fairly definite views on what the proposed Association should do:

- 1) It should primarily promote market development
- 2) It should advise on research to assure co-ordination with market needs
- 3) It should provide broad guidelines for major production problems

The Rapeseed Association is guided by a Board of Directors. The first Board is constituted as follows:

COMPOSITION OF THE BOARD

RAPESEED GROWERS

1. Manitoba Mr. D.S. Marshall, Ninga
2. Saskatchewan (to be nominated)
3. Alberta Mr. M. Nikolachuk, Woking

GROWERS' ORGANIZATIONS

1. Alberta Wheat Pool Mr. G.L. Harrold, Calgary
2. Saskatchewan Wheat Pool Mr. E.K. Turner, Regina
3. United Grain Growers Ltd. Mr. A.M. Runciman, Winnipeg

CRUSHERS

1. Western Rapeseed Crushers..... Mr. J.R. Reynolds, Saskatoon
2. " " " "..... Mr. J.J. Banfield, Lethbridge
3. Eastern Rapeseed Crushers..... Mr. M.J. McDonald, Montreal

EXPORTERS

1. Exporters & Shippers Assoc. Wpg..... Mr. C. Kroft, Winnipeg
2. " " " "..... Mr. J.T. Dallas, Winnipeg
3. Vancouver Grain Exporters Assoc..... Mr. T. Hoyer, Vancouver

FEED MANUFACTURERS

1. Canadian Feed Mfgs. Assoc..... Mr. A.O. Walberg, Weston, Ont.
2. British Columbia Feed Mfgs..... Mr. Gavin Mouat, Ft. Langley, B.C.

MARGARINE MANUFACTURERS

1. Institute of Oil Food Products..... (to be nominated)

GRAIN EXCHANGES

1. Winnipeg Grain Exchange..... Mr. J.E. McCannel, Winnipeg
2. Vancouver Grain Exchange..... Mr. R.A.V. Lester, Vancouver

TERMINAL ELEVATORS

1. B.C. Terminal Elevator Operators..... Mr. H.K. Moen, Vancouver
2. Lakehead Terminal Elevator Assoc..... Mr. J.E. Dehod, Winnipeg

LINE ELEVATORS

1. North-West Line Elevator Assoc..... Mr. J.D. MacDonald, Winnipeg

SEED GROWERS

1. Canadian Seed Growers Assoc..... (to be nominated)

PROVINCIAL DEPTS. OF AGRICULTURE

1. Representing 3 Prairie Provinces..... Mr. O.G. Bratvold, Edmonton

OTHERS

1. Director At Large..... Mr. H.F. Francis, Calgary

Mr. A.M. Runciman has been elected as the first president and Mr. M.J. McDonald as vice-president.

An Executive committee of seven has been chosen to conduct the business of the Association between annual meetings. Mr. Harry F. Francis of Calgary has been elected chairman.

Members of the Executive Committee are the following:

Chairman: Mr. M.F. Francis, Calgary
Mr. A.M. Runciman, Winnipeg
Mr. M.J. McDonald, Montreal
Mr. C. Kroft, Winnipeg
Mr. J.J. Banfield, Lethbridge
Mr. H.K. Moen, Vancouver
Mr. J.T. Dallas, Vancouver

Five standing committees have been established:

Finance Committee
Trade Development
Public Relations
Research Committee
Traffic and Tariffs

Mr. James McAnsh is the new Executive Director in charge of the operation of the Association, and he publishes its monthly report, the Rapeseed Digest.

All inquiries concerning the Association should be directed to:

Mrs. J. Clark
Rapeseed Association of Canada
965 Grain Exchange Building
Winnipeg 2, Manitoba.
Telephone 943-6927 (Area Code 204)

or to:

Mr. James McAnsh
400-837 West Hastings Street
Vancouver 1, B.C.
Telephone 682-7632 (Area Code 604)

or to:

Mr. H.F. Francis
United Grain Growers Ltd.
Lougheed Building
Calgary, Alta.

NUTRITIONAL VALUE OF RAPESEED MEAL

On April 15, 1966, the Feed and Fertilizer Unit of the Plant Products Division, Canada Department of Agriculture, issued a memorandum rescinding restrictions concerning the use of rapeseed meal in feed formulations.

As a result of a reference to the differences in nutritional value between expeller and solvent extracted meals, some studies were undertaken to examine meals produced by mild expeller processing.

Upon submission of the evidence of these investigations, which confirmed previous work, the Plant Products Division issued a new memorandum on February 3, 1967:

"When rapeseed meal was going through the introductory stage of use in livestock feeds an administrative ruling under the Feeds Act was issued by the Plant Products Division of the Canada Department of Agriculture on May 5, 1958 and amended June 1, 1959. This ruling which placed limitations on the use of rapeseed meal in livestock feeds **is rescinded**. In the registration of feeds under the Feeds Act, registrants will not now be required to show the amount of rapeseed meal on the application for registration.

"Our previous memo stated that evidence indicates solvent extracted rapeseed meal to be superior to Expeller Rapeseed Meal. Tests carried out in the past year (substantiate previous tests) and cast doubt on the complete validity of this statement. Therefore, in view of the accumulated evidence there is good indication that Expeller Rapeseed Meal produced under low temperature processing conditions and containing at least 6% residual rapeseed oil (fat) can be expected to give results in growth promotion not significantly different from those obtained by using solvent extracted rapeseed meal or pre-press solvent extracted rapeseed meal.

"However, rapeseed meal should still be used with some discretion in some livestock feeds, especially sow feeds; it is not unlike a number of other feed ingredients that must also be used with discretion. Recent studies in Canada on the utility and safety of Rapeseed meal have satisfactorily established that this meal can be effectively and safely used in accordance with good feed formulating practices.

"A summary of nutritional uses of rapeseed meal has been compiled in a book entitled "Rapeseed Meal for Livestock and Poultry, A Review", and copies may be obtained at a price of \$2 from Queen's Printer and Controller of Stationery, Ottawa, Canada. Catalogue Number is - A53-1257. It may also be obtained from Canadian Government Bookshops in Ottawa, Toronto, Montreal, Winnipeg or Vancouver."

PROTEIN/NITROGEN FACTORS FOR OILSEEDS

The Grain Research Laboratory, Winnipeg, discusses in its Annual Report of 1966 the validity of the commonly used factor of 6.25 as a measure of protein content. Quantitative amino acid compositions can be used to calculate the protein/nitrogen ratios on a fundamental basis since, chemically speaking, amino acids minus the elements of water are equivalent to protein content.

Applying this approach to barley, oats, rye, flaxseed, rapeseed, yellow mustard and sunflower, the Grain Research Laboratory found the protein/nitrogen factor to vary from 5.3 to 5.7. The report concludes that these values are significantly lower than the commonly used factor 6.25 and it suggests that the protein content of materials used for human and animal nutrition is considerably lower than the accepted value.

TREATMENT OF RAPESEED MEAL WITH IRON SALTS

The National Research Council of Canada announced the development by Dr. C.G. Youngs of the Prairie Regional Laboratory, Saskatoon of a new chemical treatment of rapeseed meal designed to destroy potentially goitrogenic compounds.

Ferrous sulfate appeared the most convenient from the point of view of cost and non-toxic effect on animals. The process consisted of the treatment of rapeseed meal with an aqueous solution of ferrous sulfate and subsequent steam-stripping and proved to be feasible and inexpensive when tested on a plant scale. A very small amount of ferrous sulfate was sufficient to achieve the complete decomposition of thioglucosides.

The treatment resulted in the production of diglucosyl-disulfide, nitriles and sulfate. Some of the nitriles formed are steam-volatile, such as 1-cyano-3-butene and 1-cyano-4-pentene while others, like hydroxynitriles are only lightly steam-volatile and remain in the meal.

The polish varieties, *B. campestris*, gave only very small quantities of the hydroxynitrile, while *B. napus* produced larger quantities.

Professor B.E. March of the University of British Columbia found in chick feed studies that treated meal gave similar growth rates to untreated meal. Professor March concluded that untreated meal caused an enlargement of the thyroid gland when fed at the 15% level, but that this goitrogenic effect of commercial meals was not reflected in the rate of growth. Similar results with regard to goitrogenicity of rapeseed meal in the absence of a growth-depressing effect were observed in experiments at the University of Alberta.

Other investigators studied the effect of iron-treated meals, derived predominantly from *B. campestris* varieties, on pigs. While pigs fed commercial rapeseed meal were as efficient as pigs fed soybean meal, pigs receiving iron-treated meal were less efficient in feed conversion.

Feeding hydroxynitriles to mice showed a high degree of toxicity. Until the nature of the reactions and the nutritional effect of all decomposition products are better known, the National Research Council will not recommend this treatment as a solution to the propoitrin-problem of rapeseed meal.

For further information, inquiries should be directed to:

Canadian Patents and Development Ltd.,
National Research Council,
Montreal Road,
Ottawa, Canada.

ZERO-ERUCIC ACID RAPESEED: A CORRECTION

On page 20 of the April 1967 issue of "Fats and Oils in Canada" it was erroneously stated that the rapeseed grown experimentally in Saskatchewan was derived from *Brassica campestris*. This is not the case, the strain grown is derived from *Brassica napus*, i.e. a so called Argentine variety.

In this connection it may be mentioned that the experimental acreage grown under contract in Saskatchewan in 1967 has been estimated to have fallen short of expectations and that no more than 10,000 acres of the zero-erucic acid strain may be harvested for commercial testing.

AMOUNT AND COMPOSITION OF HULL IN RAPESEED AND MUSTARD

by
Dr. C. G. Youngs
Prairie Regional Laboratory,
National Research Council,
Saskatoon, Sask.

It has been suggested from time to time that the fibre content of rapeseed meal could be reduced by removal of the hull or seed coat prior to oil extraction. To determine the feasibility of such a process the amount and composition of the hull of two varieties of rapeseed and an oriental mustard were determined. The seeds were dehulled by passing them through cracking rolls and separating the hulls from the meats by aspiration on a laboratory scale. Visual inspection indicated at least 90% removal of hulls from the meats and no more than 5% meats in the hull fraction. Oil, protein and crude fibre determinations on the original seed, hulls and meats are given in the following table:

	Tanka Rapeseed	Arlo Rapeseed	Oriental Mustard
%Hull*.....	16.5	18.7	13.2
%Oil*			
Seed.....	41.5	40.0	42.9
Hull.....	16.0	16.2	17.5
Meats.....	47.1	45.0	47.2
%Protein**			
Seed.....	44.7	44.2	45.8
Hull.....	18.7	20.6	22.2
Meats.....	53.6	53.4	52.3
%Crude Fibre**			
Seed.....	11.8	11.7	7.2
Hull.....	34.3	31.6	22.9
Meats.....	3.0	3.6	3.5

* moisture free basis

**moisture free, oil free basis

Dehulling does have the very desirable effect of reducing the fibre and increasing the protein content of the meal. However, the hull contains 6% to 7% of both the oil and protein in rapeseed and it is doubtful if the increased value of meal could offset such a loss unless the hull could be sold as a feed constituent at around one half the price of the non-dehulled meal.

ZERO-ERUCIC ACID RAPESEED OIL UTILIZATION: CANADA PACKERS' PATENT OF CANBRA SALAD OIL

The Canada Department of Agriculture developed rapeseed varieties containing erucic acid-free oils, which induced Canada Packers to examine their usefulness in salad oil formulations.

A Canadian Letters Patent, Number 726140, issued January 18, 1966, and owned by Canada Packers, describes an invention entitled "Salad Oil From Zero-Erucic Acid Rapeseed Oil", and relates to a process for the production of salad oil by partial hydrogenation and winterization.

A member of the research staff of Canada Packers Limited previously submitted a detailed account of his investigations of this oil at the annual meeting of the Canadian Committee on Fats and Oils in Ottawa.

Canada Packers Limited recently publicized the tentative terms of agreement for licensing this patent. These terms include the following major points:

- 1) The license will be non-exclusive
- 2) The license shall pay a royalty of 10 cents
for each 100 pounds of salad oil derived from
the use of the invention.

The name proposed for this entirely new vegetable oil is "Canbra", derived from the roots "Canadian" and "Brassica" and it is expected that the name "Canbra" will be recognized as a generic name.

Canada Packers claims:

"The oil appears to be satisfactory for shortening and margarine manufacture at least on an equivalent basis to soya oil. For salad oil and in particular the lightly hydrogenated oil, Canbra offers advantages over soybean oil in flavor, stability and improved winterizing yields.

"Typical fatty acid contents and iodine values are shown in the following table for soybean, two types of Canadian rapeseed oil, two crops of Canbra oil, hydrogenated, winterized soybean oil and hydrogenated, winterized Canbra oil".

FATTY ACIDS		PERCENT COMPOSITION LIQUID OILS					% COMPOSITION HYDRO WINTERIZED OILS		
		Soybean	Rape		Canbra		Soybean	Canbra	
					1965	1966		1965	1966
myristic.....	C ¹⁴	0.1	—	—	—	—	0.3	—	—
myristoleic.....	C ^{=₁₄}	—	—	—	—	—	—	—	—
palmitic.....	C ¹⁶	10.0	3.2	2.5	4.0	3.8	13.8	4.6	4.5
palmitoleic.....	C ^{=₁₆}	0.2	0.3	0.2	0.3	0.5	0.7	0.3	Tr.
stearic	C ¹⁸	4.4	1.2	1.3	1.7	2.0	3.7	3.3	4.0
oleic	C ^{=₁₈}	23.5	33.5	23.4	59.6	62.6	35.5	69.1	75.7
linoleic.....	C ^{=₁₈}	52.5	19.0	17.1	20.5	20.3	43.8	15.3	13.3
linolenic.....	C ^{=₁₈}	9.4	7.3	9.3	9.7	8.9	2.2	1.9	1.2
arachidic.....	C ²⁰	—	0.7	1.2	0.7	0.5	—	0.5	0.2
gadoleic	C ^{=₂₀}	—	11.1	11.5	1.5	1.4	—	2.2	1.1
	C ^{=₂₀}		—	0.8	—	—	—	—	—
behenic.....	C ²²	—	—	—	—	—	—	—	—
erucic	C ^{=₂₂}	—	23.7	32.4	2.0	—	—	2.8	—
Iodine Values.....		130-135	109	104	112	113	112	95	92

TABLE 19
Canadian Rapeseed Prices⁽¹⁾

	(crop year) (cents and eighths per bushel)			
	1963-64	1964-65	1965-66	1966-67
August		254/4	232	289/5
September.....	278/1 ⁽²⁾	259/3	230/3	274/6
October.....	277/6	262/3	244	265/5
November	279/4	286/5	271/2	271
December	282/5	308/6	260	285/6
January.....	286/1	316/5	295	280/7
February.....	271/4	317/5	287/5	284/3
March	253/2	310	265	294/4
April	255	304/6	269/2	280/5
May	268/4	287	270/4	
June	270/2	272/6	284/2	
July.....	269	262/1	282/6	
Yearly average	271/5	287	266	

(1) Winnipeg Grain Exchange No. 1 Canada Rapeseed, basis in store Vancouver.

(2) Starting September 16, eleven-day average only.

Source: DBS No. 22-001

TABLE 20
Canadian Exports of Rapeseed

	(tons)				
<u>Destination</u>	1962	1963	1964	1965	1966
United Kingdom	1,775	1,820	2,296	8,922	4,055
Belgium-Luxemburg.....	2,783	—	—	1,696	8,369
West Germany.....	14,783	241	232	22,646	21,710
Italy.....	90,407	19,223	3,265	48,126	60,288
Netherlands	31,284	2,772	9,342	22,429	40,005
Spain	—	—	1,003	152	28
Czechoslovakia	—	—	—	15,184	—
Poland.....	—	—	—	9,921	—
Pakistan	—	—	—	22,462	19,841
Japan.....	52,309	114,738	62,492	114,556	194,498
United States	701	382	3,133	119	141
Algeria	12,225	13,888	—	—	—
France.....	8,550	—	—	—	—
Taiwan	—	2,205	4,235	—	—
Finland	—	—	2,246	—	—
India	—	—	2,800	—	—
Total Weight (tons)	214,817	155,267	91,041	266,213	348,936
Total Weight (thousand bushels).....	8,590	6,210	3,640	10,650	13,957
Total Value (thousands of \$).....	20,667	16,053	10,152	30,900	38,480

Source: DBS, Trade of Canada

TABLE 21
Canadian Exports of Rapeseed Oil

(thousands of pounds)

<u>Destination</u>	1962	1963	1964	1965	1966
United States	<u>714</u>	<u>122</u>	<u>391</u>	<u>5</u>	<u>(1)</u>
Total	714	122	391	5	(1)
Value (thousands of \$)	76	11	45	1	(1)

(1) In 1966 the previous class for rapeseed oil #393-56 was dropped, and the oil is now included in the basket class #393-99

Source: DBS, Trade of Canada

THE CANADIAN SUNFLOWERSEED SITUATION

A comparison of Canadian sunflowerseed crushings, Table 7, with domestic production figures indicates that during the past crop year, less than half the crop was processed into meal and oil. Most of the crop is grown in Manitoba under contract with the Co-operative Vegetable Oils Ltd. of Altona, Man. Again, about 70% of this acreage was grown with the Peredovik variety, which is high in oil content containing averages from 42.3 to 45.3% oil (dry basis), depending on the area. A smaller acreage was grown with the Armavirec variety, which ripens about 10 days earlier and shows lower yields and oil content.

The Admiral and Commander varieties are grown for the specialty bird feed trade and for the confectionery, roasting and hulled seed trades respectively. Crushing data for 1966-67 indicate that some of the Peredovik variety may not have been used for crushing but was exported as seed.

All the seed grown in Saskatchewan and Alberta is said to have been of the oilseed varieties.

Private estimates for 1967 forecast an acreage not exceeding 10,000 acres for the combined Saskatchewan and Alberta areas. Lack of success in harvesting mature seed and a trend away from summerfallowing of wheat land are said to discourage farmers from growing more sunflowerseed in that part of the Prairies.

In Manitoba, the acreage may again reach or exceed 50,000 acres in 1967, compared with 32,000 acres in 1966. The Co-op in Altona stated that there is a ready market for 50 million pounds of the oilseed varieties in Manitoba; i.e., the output of more than 60,000 acres.

In 1966 the consumption of sunflower oil is not reflected by the domestic production of about 4.4 million pounds. This oil is customarily marketed largely as salad oil in Western Canada. In 1966 East European sunflower oil entered the Canadian domestic market and it is estimated that more than 20 million pounds of this oil were used primarily in salad and cooking oils, but some also in the manufacture of margarine. European sunflower oil was offered at a price below that of domestic soybean oil.

Exports of sunflowerseed, Table 22, rose by 37% from 6,877 tons in 1965 to 9,401 tons in 1966. The average price per pound of exported seed increased from 13.7¢ to 16.5¢. Seed exports to the United States more than doubled during this period and were responsible for the increase. The United Kingdom market was reduced to insignificance, while Germany and The Netherlands maintained their previous import volume in 1966.

TABLE 22

Canadian Exports of Sunflowerseed

(short tons)

<u>Destination</u>	1962	1963	1964	1965	1966
United Kingdom	—	—	3	1,239	11
Belgium/Luxemburg	—	—	52	26	—
Denmark,	—	—	28	22	—
Germany, West	—	777	1,089	1,697	1,776
Netherlands	—	943	1,674	792	643
United States	7,025	5,424	2,397	3,101	6,971
Sweden	—	—	(1)	—	—
Republic of South Africa	—	(1)	—	—	—
Trinidad	3	—	—	—	—
Total	7,028	7,144	5,242	6,877	9,401
Total Value (thousands of \$).....	1,202	1,178	790	946	1,557

(1) Less than 1 ton.

Source: DBS, Trade of Canada.

TABLE 23
Canadian Exports of Mustard Seed

	(short tons)				
<u>Destination</u>	1962	1963	1964	1965	1966
United Kingdom	560	1,683	1,109	3,209	2,016
Belgium/Luxemburg	2,230	2,762	4,878	4,716	3,080
France	—	—	—	—	827
Israel	—	—	—	—	20
Germany, West	1,186	974	2,381	2,118	3,160
Italy	6	39	33	39	44
Netherlands	612	2,313	4,347	7,839	10,322
Sweden	—	—	3	—	33
Switzerland	5	103	95	355	334
Japan	4,169	6,250	5,351	6,316	6,720
Australia	3	—	—	—	—
Peru	—	—	11	23	17
Trinidad	1	3	—	—	7
United States	<u>4,609</u>	<u>8,909</u>	<u>8,169</u>	<u>12,324</u>	<u>24,017</u>
Total	13,381	23,036	26,377	36,939	50,596
Total Value (thousands of \$)	1,740	2,725	2,926	4,656	6,176

Source: DBS, Trade of Canada.

Comments to Table 23, Exports of Mustard Seed

Exports of mustard seed continue to grow in 1966, rising by about 37% from 37,000 tons in 1965 to 50,600 tons in 1966. Increased demand from the United States market accounted for most of this growth. Continental Europe increased its imports from Canada, while Japan's volume remained at the same level.

The Board of Grain Commissioners authorized the definition of a Commercial Grade Trade No. 4 Canada Western Domestic Mustard Seed, effective August 1, 1967. This effective date is concurrent with changes in Board Regulations eliminating off-grades "Rejected" for all classes of Domestic Mustard Seed. Therefore, as of August 1, 1967, Domestic Mustard Seed that does not qualify for the statutory grades of Nos. 1 C.W., 2 C.W., and 3 C.W. or for the Commercial Grade No. 4 C.W. as defined, will be graded as "Sample".

No. 4 C.W. mustard seed must have a minimum test weight of 50 pounds per bushel and must not contain less than 90% of one class of seed, where the class refers to yellow, brown or Oriental varieties. The standard of quality contains further the specifications for degree of soundness, i.e., maximum damaged seed, heated seeds and seeds with green endosperm, etc. It contains also a standard of cleanliness, i.e., permissible contamination.

FLAXSEED, LINSEED OIL, LINSEED MEAL

The attempt to calculate supply and disposition patterns for linseed oil and meal on a calendar year basis, Table 24, may not be as meaningful as a calculation based on the crop year, however, the trends compare well with each other.

Domestic disappearance for linseed oil in 1966 has returned again to its usual level after a drop in 1965. A reduction in domestic production tended to soften the effect of smaller exports. The same reasoning can be applied to linseed meal, except that the calculation of apparent domestic disappearance shows here an 11% decline compared with a 31% rise for linseed oil.

Average flaxseed prices remained rather steady in the course of 1966, fluctuating between 290/5 and 303/3 (Table 25.)

However the validity of comparing flaxseed exports on a calendar year basis may also be challenged. The data presented in Table 26 compare well with crop year data. Exports increased 26% in 1966, rising from 451,000 tons in 1965 to 566,000 tons in 1966. The export value per ton dropped from \$114 to \$106 during this period. While Japan, The Netherlands and the United Kingdom together accounted for more than 60% of Canada's exports, 18 countries shared this export market. Belgium, West Germany, Spain, Czechoslovakia and Yugoslavia were other substantial customers. Despite a decline of 21% in exports to the United Kingdom, total exports to Western Europe increased by more than 100,000 tons.

Linseed oil exports, Table 22, to the United Kingdom were cut in half in 1966, and the moderate volume reported to have been exported to the United States may represent a transshipment.

Linseed meal exports, Table 28, have returned to the level of the years 1962-64 as a result of a reduction of exports to the United Kingdom. Some doubt has been expressed about the validity of the volume of 21,278 tons reported to have been exported to the United Kingdom in 1965. Barbados and Ireland purchased moderate quantities of linseed meal in 1966. As a rule, Canada exported about 30% of the domestic linseed meal production.

While nearly all rapeseed was crushed in Western Canada, the reverse holds true for flaxseed. Less than 10% of this Prairie crop was crushed in Western Canada.

The Board of Grain Commissioners published preliminary data on export clearances of flaxseed for the crop year 1966-67 and reported a volume of 16.6 million bushels (465,000 tons), some 2.3 million bushels (64,500 tons) below the 1965-66 exports. A decrease of 1.6 million bushels in purchases by Britain dropped this market from first place last year, to third in 1966-67, with 3.5 million bushels. Increased sales helped Japan to become Canada's largest customer with 4.8 million bushels and The Netherlands with 4.0 million bushels occupied the second place. Reduced shipments to Belgium, France and the Federal Republic of Germany caused a one-million-bushel decline in imports of the European Economic Community.

Canadian farmers marketed 20.1 million bushels of flaxseed in 1966-67, compared with 23.9 million a year earlier. The crushing volume declined slightly from 2.5 million to 2.4 million bushels during this period, and total visible stocks increased from 8.9 million bushels on July 31, 1966 to 10.5 million bushels in 1967.

Outlook:

Latest D.B.S. estimates of a very sharp drop in the 1967 flaxseed crop to 10.3 million bushels would bring the total 1967-68 supplies to 20.8 million bushels, not counting farm stocks. If Canada maintains the present crushing and export volumes, the supplies will barely meet the demand. Soybean oil and other oilseed meals are likely to make inroads in some of the markets of flaxseed products.

Apart from Canada, the United States and Argentina are the world's major exporters of flaxseed and linseed products.

In 1966, Argentina exported 131,000 tons of linseed oil. Argentina does not permit the export of flaxseed. The United States exported 187,000 tons of flaxseed and 63,000 tons of linseed oil.

Argentina's flaxseed crop in 1966-67 amounted to 595,000 tons and has been forecast to range around 500,000 tons in 1967-68. The Argentine government has raised the guaranteed price to 2,500 pesos, up 850 pesos from last year.

The preliminary United States flaxseed crop estimate of 520,000 tons for 1967, compared with 667,000 tons last year, also shows a drastic reduction.

For these three major flaxseed producing and exporting countries, the total crop estimate, therefore, shows a drop from 1.9 million tons in 1966-67 to 1.3 million tons in 1967-68. On an oil basis, this represents a decline from 673,000 tons to 460,000 tons. Oil World estimates that total supplies of these three countries in 1967-68 will be reduced by about 300,000 tons to a level of 865,000 tons of seed, the smallest supply in years.

TABLE 24
Canadian Supply and Distribution of Linseed Oil and Meal

	(millions of pounds)				
	1962	1963	1964	1965	1966
<u>Linseed Oil</u>					
Stocks, Jan. 1 (1)	10.2	9.8	8.7	7.6	11.6
Domestic Production.....	45.4	46.7	58.9	54.9	48.6
Supply	55.6	56.5	67.6	62.5	60.2
Exports	4.4	8.0	19.0	22.5	12.4
Stocks, Dec. 31	9.8	8.7	7.6	11.6	10.5
Apparent Domestic Disappearance	41.4	39.8	41.0	28.4	37.3
	(thousands of tons)				
	1962	1963	1964	1965	1966
<u>Linseed Meal</u>					
Stocks, Jan. 1	3.5	1.3	0.4	5.1	1.7
Domestic Production.....	40.7	41.3	53.6	48.8	42.5
Supply	44.2	42.6	54.0	53.9	44.2
Exports	12.7	12.4	15.1	23.3	15.3
Stocks, Dec. 31 (1)	1.3	0.4	5.1	1.7	3.4
Apparent Domestic Disappearance	30.2	29.8	33.8	28.9	25.5

(1) Stocks held by crushing plants

Source: Based on DBS data

TABLE 25
Canadian Flaxseed Prices(1)

	(crop year)				
	(cents and eighths per bushel)				
	1962-63	1963-64	1964-65	1965-66	1966-67
August	368	319/3	331/1	307/2	300/7
September	359/6	321/1	324/4	314/1	299/2
October	338	318/3	318/4	306/3	292
November	324/1	316	315/2	293/3	290/5
December	320/7	316/1	314/1	292/5	293/2
January	324/3	322/4	315	299	293/5
February	327/4	322/4	323/1	303/3	295/6
March	331/4	323/2	324/7	297/7	299/6
April	331/3	316/2	321/6	296/3	301/5
May	334/1	314	324/5	292/6	
June	329	318/2	319/2	294	
July	331	328	312/3	295/7	
Yearly average	335	319/6	320/3	299/3	

(1) Winnipeg Grain Exchange No. 1 C.W. Flaxseed, basis Fort William-Port Arthur
Source: DBS No. 22-001

TABLE 26
Canadian Exports of Flaxseed
(short tons)

<u>Destination</u>	1963	1964	1965	1966	August 1965	–December 1966
United Kingdom.....	120,786	141,303	142,356	112,164	81,346	63,600
Ireland	—	1,008	—	—	—	—
Belgium-Luxemb.	12,812	9,368	11,201	38,588	—	4,189
Finland.....	4,485	2,492	—	2,993	—	—
France	8,877	20,296	17,113	11,548	6,851	9,184
Germany, West.....	11,327	22,178	31,839	44,439	9,909	20,121
Italy	—	538	540	8,849	—	8,019
Netherlands	13,878	59,471	82,283	123,186	44,903	75,568
Norway	5,646	8,850	7,565	11,484	3,771	4,956
Portugal.....	3,255	6,887	2,314	4,830	—	2,506
Spain.....	5,799	15,985	10,943	34,343	4,802	15,868
Switzerland	—	—	—	57	—	57
Czechoslovakia.....	5,770	6,753	—	14,968	—	3,528
Germany East	10,351	—	—	4,492	—	—
Yugoslavia.....	3,528	9,921	25,817	20,504	25,817	10,648
Israel	1,294	4,611	3,486	2,112	1,045	—
Japan	110,924	104,545	114,559	124,282	46,546	48,003
Korea	—	—	661	6,679	—	—
United States.....	40	6	1	48	—	48
Greece	1,784	1,422	112	—	112	—
Morocco	2,264	—	—	—	—	—
Australia	224	—	—	—	—	—
Peru	—	2	—	—	—	—
Trinidad	1	—	—	—	—	—
Total.....	323,045	415,637	450,790	565,565	225,102	266,293
Total Value (thousands of \$)	38,560	48,662	51,658	60,816	25.090	27,989

TABLE 27
Canadian Exports of Linseed Oil
(thousands of pounds)

<u>Destination</u>	1962	1963	1964	1965	1966
United Kingdom.....	4,364	7,966	17,998	22,497	11,211
Syria	12	—	9	—	—
Nigeria	—	—	10	—	—
Peru.....	4	2	6	—	4
Venezuela.....	12	50	66	4	—
Bermuda	3	2	6	—	—
British Honduras	—	—	1	—	—
Barbados.....	16	14	13	12	11
Jamaica.....	—	—	1	—	—
Leew. Wind. Is.....	1	—	1	1	—
Cuba	—	—	881	—	—
Netherlands Antilles.....	1	3	3	1	—
United States	24	—	1	—	1,129
Ecuador.....	—	—	—	3	—
Honduras.....	1	3	—	—	—
Columbia.....	—	7	—	—	—
Total.....	4,445	8,039	18,996	22,518	12,359
Total Value (thousands of \$).....	588	953	2,281	2,598	1,276

Source: DBS, Trade of Canada.

TABLE 28
Canadian Exports of Linseed Oil Cake and Meal
(short tons)

<u>Destination</u>	1962	1963	1964	1965	1966
United Kingdom.....	9,996	10,394	12,145	21,278	9,336
Guiana.....	264	124	192	114	—
British Honduras.....	1	—	—	—	—
Barbados.....	30	79	38	12	2,626
Leew.-Wind. Is.....	114	96	117	114	185
Trinidad.....	827	976	860	735	878
United States.....	1,505	601	743	1,002	556
Ireland.....	—	—	1,046	—	1,544
Venezuela.....	—	105	—	—	—
Cuba.....	5	—	—	—	—
Netherlands Antilles.....	—	1	—	—	—
Total.....	12,742	12,376	15,141	23,255	15,257
Total Value (thousands of \$).....	1,016	1,117	1,260	1,897	1,347

Source: DBS, Trade of Canada.

CANADIAN TRADE IN SPECIFIED EDIBLE VEGETABLE FATS & OILS

Comments to Tables 29 to 38:

The commodities covered by these tables cover ingredients for final products, which frequently compete with each other or with domestically produced oils. Prices of some oils like peanut oil, sunflowerseed oil, rapeseed oil and palm oil produced in Europe or Africa dropped to a level where they could successfully compete on the North America market. As a result Canada's imports grew considerably.

	1965	1966
	(millions of pounds)	
Palm Oil	18.9	26.8
Peanut Oil	9.2	31.6
Vegetable Oils & Fats (mainly sunflowerseed & rapeseed oils)	7.5	38.7
Cottonseed Oil	<u>47.6</u>	<u>32.2</u>
	83.2	129.3

This increase of 46.1 million pounds in an area where oils are interchangeable had a considerable influence on the volume of production of rapeseed and soybean oils in Canada. Palm oil and peanut oil enjoy easy access to Canada, since they come from Malaysia and Nigeria, and other Commonwealth countries. The present unrest in Nigeria may affect the future flow of oil from that country.

Sunflowerseed oil and rapeseed oil are included in the import basket class "Vegetable Oils and Fats", and according to DBS data listed The Netherlands or West Germany as the country of origin. An estimated volume of more than 20 million pounds of sunflowerseed oil and 10 million pounds of rapeseed oil entered Canada in 1966. The sunflowerseed oil must have been derived from East European sunflowerseed, and the rapeseed oil could have had several countries, like Sweden, Poland, East Germany as its actual origin.

The drastic reduction in American cottonseed acreage is reflected in the decrease of cottonseed oil imports from the United States, which has traditionally been a major supplier of this oil. It is interesting to note that the United States actually imported a small volume of European cottonseed oil in 1967.

Corn oil import also rose by 41% from 14.4 million pounds in 1965 to 20.3 million pounds in 1966. Domestic production is not reported, since less than three firms are involved. However, in view of the use of corn oil in two different products, margarine and salad oil, it can be assumed that the relatively large rise in imports does not reflect any significant increase in corn oil margarine consumption. Rather, it may be assumed that corn oil also benefited from the general expansion of the salad oil market.

With regard to coconut oil imports, the rise by three million pounds in 1966 compared with 1965 is not as significant as the shift in origin. Malaysia has largely replaced Ceylon as Canada's major supplier of coconut oil, doubling her exports to Canada within one year. Philippine coconut oil, either imported directly or via the United States, accounted for 22% of the Canadian imports in 1966 compared with 13% in 1965.

Palm kernel oil imports did not change significantly in 1966. However, instead of the United Kingdom, Nigeria is now listed as the main supplier, which indicates the effect of the Nigerian policy to process palm kernels domestically.

Ghana and the United Kingdom again accounted for most of the imports of cocoa butter into Canada, which supplements the unreported volume of cocoa butter derived from imported beans in Canada. It can be assumed that all imported cocoa butter has been produced by pressing rather than by solvent extraction.

Olive oil imports serve a special market which showed no changes in 1966.

Canada's exports "Vegetable Oils and Fats", Table 38, which include specialty fats and also salad and cooking oils exported to West Indian countries, remained relatively insignificant in 1966.

TABLE 29
Canadian Imports of Cocoa Butter
(thousands of pounds)

<u>Country of Origin</u>	1962	1963	1964	1965	1966
United Kingdom	3,875	2,713	2,541	2,070	4,821
Germany, West	—	47	11	28	—
Italy	285	882	143	—	—
Netherlands	1,465	1,313	2,616	1,196	779
Poland	—	—	42	—	—
China, Communist	—	—	—	45	—
Ghana	3,702	4,279	7,531	9,724	8,928
Jamaica	190	710	146	56	235
Trinidad — Tobago	70	98	100	50	100
United States	200	298	29	16	20
Brazil	3,080	1,066	—	—	661
Ecuador	11	—	—	—	—
Venezuela	22	—	—	—	—
Dominican Republic	—	111	—	—	—
Spain	—	33	—	—	—
French Equatorial Africa	22	—	—	—	—
Cameroons	—	220	—	—	—
Costa Rica	14	5	—	—	—
Total	12,935	11,766	13,157	13,185	15,545
Total Value (thousands of \$)	7,188	7,268	7,388	6,658	8,065
Average Price (cents per pound)	55.5	61.8	56.1	50.6	52.0

Source: DBS, Trade of Canada.

TABLE 30
Canadian Imports of Coconut Oil
(thousands of pounds)

<u>Country of Origin</u>	1962	1963	1964	1965	1966
United Kingdom	5	1	9,077	354	3,109
Germany, West	4	6	7	7	2
Ceylon	34,422	25,796	22,464	18,257	1,841
Malaysia	16,851	9,576	4,707	14,124	28,262
Ireland	4	—	—	—	—
Philippines	1,792	—	1,968	2,386	3,275
United States	1,325	2,432	1,528	2,931	6,152
Fiji	—	34	—	57	—
Australia	—	—	—	1,502	—
Total	54,402	37,845	39,750	39,618	42,641
Total Value (thousands of \$)	5,590	4,343	5,329	6,122	5,800
Average Price (cents per pound)	10.3	11.5	13.4	15.5	13.6

Source: DBS, Trade of Canada.

TABLE 31
Canadian Imports of Corn Oil⁽¹⁾
(thousands of pounds)

<u>Country of Origin</u>	1964	1965	1966
United Kingdom	898	1,598	667
Netherlands	1,102	—	1,963
United States	15,067	12,779	15,922
France	—	—	886
West Germany	—	—	870
Total	17,067	14,377	20,308
Total Value (thousands of \$)	2,068	2,341	3,706
Average price (cents per pound)	12.1	16.3	18.3

(1) Until December 1963 corn oil was included with Class No. 1620 Vegetable Oils Crude and Refined, nop.
Source: DBS, Trade of Canada.

TABLE 32

Canadian Imports of Cottonseed Oil

(thousands of pounds)

<u>Country of Origin</u>	1962	1963	1964	1965	1966
Netherlands	—	—	—	—	3,514
United States	27,080	33,668	37,422	47,646	28,711
United Kingdom	4,232	4,860	—	—	—
Argentina	1,971	—	—	—	—
Total	33,283	38,528	37,422	47,646	32,225
Total Value (thousands of \$)	4,193	4,494	4,247	6,102	4,646
Average Price (cents per pound)	12.6	11.7	11.3	12.8	14.4

Source: DBS, Trade of Canada.

TABLE 33

Canadian Imports of Olive Oil

(thousands of pounds)

<u>Country of Origin</u>	1962	1963	1964	1965	1966
West Germany	—	—	—	—	2
France	52	108	94	159	84
Greece	526	124	247	410	317
Italy	1,277	466	1,012	653	1,030
Portugal	169	91	240	163	296
Spain	1,291	870	1,869	1,093	1,571
Israel	1	—	1	1	—
Turkey	11	—	11	10	—
Tunisia	26	—	48	—	—
United States	181	152	183	244	71
Cyprus	—	99	—	—	—
Total	3,534	1,912	3,705	2,731	3,371
Total Value (thousands of \$)	1,112	745	1,191	1,008	1,250
Average Price (cents per pound)	31.4	39.1	32.2	36.7	37.1

Source: DBS, Trade of Canada.

TABLE 34

Canadian Imports of Palm Oil

(thousands of pounds)

<u>Country of Origin</u>	1962	1963	1964	1965	1966
Malaysia	28,636	25,162	13,112	18,913	26,289
United Kingdom	—	22	—	—	472
Congo	48	—	—	—	—
United States	2,432	299	—	—	—
Total	31,116	25,483	13,112	18,913	26,761
Total Value (thousands of \$)	2,958	2,477	1,393	2,180	2,800
Average Price (cents per pound)	9.5	9.7	10.6	11.5	10.5

Source: DBS, Trade of Canada.

TABLE 35

Canadian Imports of Palm Kernel Oil

(thousands of pounds)

<u>Country of Origin</u>	1962	1963	1964	1965	1966
United Kingdom	4,979	7,972	6,097	8,466	278
Netherlands	65	78	409	211	318
Nigeria	—	—	821	—	8,463
United States	—	30	—	121	123
Ireland	6	—	—	—	—
Congo, Leopoldville	—	—	—	1,068	—
Total	5,050	8,080	7,327	9,877	9,182
Total Value (thousands of \$)	587	1,092	1,053	1,656	1,318
Average Price (cents per pound)	11.7	13.5	14.4	16.8	14.4

Source: DBS, Trade of Canada.

TABLE 36

Canadian Imports of Peanut Oil

(thousands of pounds)

<u>Country of Origin</u>	1962	1963	1964	1965	1966
Netherlands	—	—	—	—	1,365
United Kingdom	6,118	2,524	135	5	3,394
France	27	56	57	56	38
Nigeria	10,818	11,874	7,271	5,205	24,084
Hong Kong	115	136	128	129	129
United States	302	2,644	2,056	3,852	2,545
Republic of South Africa	1,423	1,347	—	—	—
Total	18,803	18,580	9,647	9,247	31,555
Total Value (thousands of \$)	2,629	2,403	1,213	1,421	4,499
Average Price (cents per pound)	14.0	12.9	12.6	15.4	14.3

Source: DBS, Trade of Canada.

TABLE 37

Canadian Imports of Vegetable Oils and Fats

(thousands of pounds)

<u>Country of Origin</u>	1962	1963	1964	1965	1966
Israel.	—	—	—	—	5
United Kingdom.....	6,069	6,308	224	164	59
Austria	4	14	3	14	10
Belgium/Luxemburg	556	449	—	—	—
Germany, West.....	2	616	2,209	3,286	4,756
Netherlands	2,753	10,653	668	24	32,513
Sweden	86	342	41	2,808	10
Republic of South Africa	1,132	700	—	—	—
Hong Kong	21	13	16	14	11
India	1	—	—	—	—
Japan.....	6	8	6	7	05
Colombia.....	102	—	—	—	—
United States	5,111	7,956	2,074	1,154	1,279
Denmark	—	11	16	15	16
France.....	—	1,358	—	1	—
Total	15,852	28,429	5,256	7,488	38,664
Total Value (thousands of \$).....	2,945	3,954	755	1,064	5,090

Source: DBS, Trade of Canada.

TABLE 38

Canadian Exports of Vegetable Oils and Fats⁽¹⁾

(thousands of pounds)

<u>Destination</u>	1962	1963	1964	1965	1966
United Kingdom	100	442	—	—	—
France	387	392	—	—	—
Republic of South Africa	—	(2)	1	—	—
Japan	77	147	16	—	—
Jamaica	2	—	(2)	2	—
Leew.-Wind. Is.	1	2	3	9	7
Cuba	—	—	—	3	5
United States	528	1,222	384	512	435
Guatemala	—	1	—	—	—
Nicaragua	2	21	—	—	—
Syria	—	5	—	—	—
Cyprus	—	—	—	1	—
Australia	—	—	—	23	23
British Guiana	2	6	6	40	12
Bermuda	1	1	3	40	—
British Honduras	—	—	—	2	2
Barbados	—	6	36	34	47
Trinidad-Tobago	—	2	4	13	7
Bahamas	—	—	—	—	3
Germany	—	36	9	—	—
Colombia	1,543	—	—	—	—
Total	2,642	2,283	458	677	543
Total Value (thousands of \$)	335	165	79	130	114

Source: DBS, Trade of Canada.

(1) This export class #39-399 includes sunflower oil, salad and cooking oil and certain specialty fats like pan greases.

(2) Less than one thousand pounds.

TABLE 39
Canadian Imports of Castor Oil
(thousands of pounds)

<u>Country of Origin</u>	1962	1963	1964	1965	1966
United Kingdom.....	28	15	2	7	5
India.....	22	13	21	11	13
Brazil.....	3,039	5,757	5,193	4,830	3,418
United States.....	425	164	222	161	218
Netherlands.....	—	—	—	1,769	546
Japan.....	331	—	—	—	427
Total.....	3,845	5,948	5,438	6,778	4,627
Total Value (thousands of \$).....	523	695	618	801	644
Average price (cents per pound).....	13.6	11.7	11.4	11.8	13.9

Source: DBS, Trade of Canada.

TABLE 40
Canadian Imports of Oiticica Oil
(thousands of pounds)

<u>Country of Origin</u>	1962	1963	1964	1965	1966
Brazil.....	559	448	214	204	149
United States.....	132	—	32	—	—
Total.....	691	448	246	204	149
Total Value (thousands of \$).....	122	128	50	49	30
Average price (cents per pound).....	17.7	28.6	20.4	24.0	20.1

Source: DBS, Trade of Canada.

TABLE 41
Canadian Imports of Tung Oil⁽¹⁾

(thousands of pounds)

<u>Country of Origin</u>	1962	1963	1964	1965	1966
United Kingdom	—	—	11	—	—
Hong Kong	87	208	1,101	948	1,623
Argentina	2,116	1,318	1,307	934	789
Paraguay	—	84	208	62	—
United States	416	598	232	198	96
Netherlands	—	9	—	—	—
Total	2,619	2,217	2,860	2,142	2,508
Total Value (thousands of \$)	1,039	900	744	547	514
Average Price (cents per pound)	39.7	40.6	26.0	25.5	20.5

(1) Reported as Chinawood Oil until 1963, and as Chinawood/Tung Oil since 1964.

Source: DBS, Trade of Canada.

TABLE 42
**Canadian Imports of Chemically Modified
Oils, Fats and Waxes**

(thousands of pounds)

<u>Country of Origin</u>	1964	1965	1966
United Kingdom	18	128	16
Germany, West	40	90	83
Netherlands	157	129	292
Rep. So. Africa	—	—	16
United States	14,331	12,632	8,184
Norway	10	10	—
Total	14,556	12,989	8,591
Total Value (thousands of \$)			

Source: DBS, Trade of Canada

TABLE 43

Canadian Imports of Mixtures and Derivatives of Oils, NES

(thousands of pounds)

<u>Country of Origin</u>	1964	1965	1966
United Kingdom	98	91	27
Germany West	49	29	2
Netherlands	9	12	4
United States	7,750	9,726	11,091
Sweden	3	—	—
Total	7,909	9,859	11,124
Total Value (thousands of \$)	1,191	1,112	1,163

Source: DBS, Trade of Canada

TABLE 44

**Canadian Exports of Chemically Modified
Oils, Fats and Waxes**

(thousands of pounds)

<u>Destination</u>	1963	1964	1965	1966
United Kingdom	267	104	227	465
Syria	—	5	—	10
Australia	795	1,040	1,104	1,286
British Guiana	—	31	83	81
Peru	—	—	5	5
Venezuela	94	91	125	81
United States	5,871	1,890	1,595	1,847
France	2	—	—	—
Netherlands	49	—	—	—
Ecuador	2	2	—	—
Bahamas	2	—	(1)	—
Bermuda	2	—	—	—
Leew.-Wind. Is.	1	2	3	—
Honduras	—	1	—	—
Barbados	—	1	5	—
Trinidad	5	2	1	—
Neth. Ant.	5	(1)	7	—
Jamaica	—	13	—	—
Guatemala	—	2	—	—
Total	7,096	3,184	3,156	3,779
Total Value (thousands of \$)	468	257	258	303

(1) less than 1,000 pounds

Source: DBS, Trade of Canada

CANADIAN MARINE OILS AND MEALS

Review of Canadian Marine Oil and Meal Situation

Apparent domestic disappearance, Table 47, of marine oils in 1966 increased by 10.8 million pounds over 1965. The total marginally exceeded domestic production for the first time since 1963.

Canadian production of marine oils, Table 45, in 1966 remained substantially at the same level as during the previous two years. British Columbia herring oil production declined by 13.3 million pounds (31.8%), Table 46, from 1965. The total catch on the Pacific Coast declined from 180,000 tons in 1965-66 to 134,000 tons during the 1966-67 season. The Department of Fisheries is investigating the causes for this decline. Experts claim that small spawns, rather than overfishing, are the principal cause and it is hoped that the present investigation will lead to corrective measures.

Meanwhile, the recent expansion of the herring reduction industry on the Atlantic Coast raised the output in that region to 15.9 million pounds, i.e., more than twice the 1965 output. It is worth noting that Atlantic Coast herring oil production was 12.6 million pounds below the West Coast volume, even though their respective outputs of herring meal, Table 51, were very close. The major cause may be traced to the lower oil content of the herring caught off the Atlantic Coast, where oil recoveries amounted to an estimated 6% compared with 9.6% in British Columbia.

A decline in world fish oil prices resulted in a two million pound increase of fish oil imports into Canada in 1966. The United States' share of 1.5 million pounds of menhaden oil in 1965 increased to 3.1 million pounds in 1966. Icelandic herring oil imports rose from 5.5 million pounds in 1965 to 6.2 million pounds in 1966.

Marine oil exports dropped to 8.9 million pounds, the lowest level since 1962. In particular, sales of herring oil to the United Kingdom fell from 6.8 million pounds in 1965 to 0.7 million pounds in 1966.

Whale oil exports to the United Kingdom and the United States amounted to only 1.5 million pounds in 1966.

Fish meal production in 1966 remained at 1965 levels, Table 51. As a result of the Atlantic Coast herring reduction industry expansion, output from this source increased by 14.7 thousand tons (114.8%) over 1965. At the same time, Pacific Coast herring meal production declined by 12.9 thousand tons.

The Atlantic Coast reduction industry in 1966 produced 72% of Canadian fish meal as compared to 39% in 1963.

The expansion of the Atlantic groundfish processing industry in 1965-66 has resulted in an increase in meal production.

Heavy warehouse stocks of frozen groundfish products precluded the anticipated increase in output from this source and held groundfish meal production at 1965 levels.

Canadian exports of fish meal declined slightly, Table 54, in 1966. The United Kingdom and the United States remained Canada's major customers.

REVIEW OF THE CANADIAN FISH REDUCTION INDUSTRY

Herring Landings

Herring Landings on the Atlantic Coast for 1966 were 275,000 tons, compared with 202,000 tons in 1965. The landed value increased from \$4.3 million to \$6.2 million. Herring is rapidly becoming the largest of the fish catches on the Atlantic Coast. Cod, with 281,000 tons landed, retained first place in 1966, but with a reduced margin.

Atlantic herring landings by provinces were as follows:

	1964	1965	1966
	(thousand tons)		
Newfoundland.....	9.3	13.8	31.9
Nova Scotia.....	49.3	71.6	108.1
New Brunswick	75.4	91.4	115.6
P.E.I.	1.8	2.3	2.1
Quebec	20.5	22.9	17.7
Total	156.3	202.0	275.4

The establishment of new herring reduction facilities on the East Coast continued in 1966. These new plants added approximately 3,000 tons per day to the Atlantic coast reduction capacity in 1966. Plants with a combined capacity of 4,000 tons per day are scheduled to start operations in 1967. In addition, new plants are being proposed and the expansion of existing plants is being considered, which could further augment the capacity.

As a result, by 1968 there could be 7,000 to 9,000 tons per day of reduction capacity which did not exist prior to 1965. The British Columbia industry has a capacity of 7,000 tons per day.

Cumulative landed values per ton of herring for 1966 with comparative 1965 figures are as follows:

	1965	1966
British Columbia	\$28.07	\$36.43
New Brunswick	23.57	24.31
Nova Scotia	20.15	21.63
Newfoundland.....	21.83	22.94

Table 45

Canadian Production of Marine Oils by Types and Areas

(millions of pounds)

<u>Oil</u>	1962	1963	1964	1965	1966
Atlantic Coast					
Groundfish					
Body and Offal	0.9	1.4	1.4	2.0	2.5
Liver	6.5	7.4	5.8	4.6	4.1
Herring.....	1.5	1.4	4.7	7.2	15.9
Other Fish Liver.....	—	—	(1)	(1)	(1)
Seal.....	1.7	1.5	1.3	3.0	3.3
Other.....	0.1	0.1	0.6	1.0	4.3
Atlantic Total.....	10.7	11.8	13.8	17.8	30.1
Pacific Coast					
Herring.....	40.8	52.8	44.5	41.8	28.5
Total, Canada.....	51.5	64.6	58.3	59.6	58.6

Source: Based on DBS Cat. No. 24-002

(1) Confidential, included with "Other".

TABLE 46

British Columbia Herring Production Report

Cumulative totals for the fishing season, which ends each year during the month of March.

	Final 10/3/63	Final 28/3/64	Final 27/3/65	Final 26/3/66	Final 4/3/67
<u>Total Catch, tons</u>	265,647	262,045	240,580	180,365	133,823
<u>Production</u>					
Meal, tons	48,035	46,778	43,062	32,163	23,356
Oils (thousands of pounds).....	44,100	45,100	50,300	35,600	25,684
<u>Average Yields</u>					
% Meal	18.2	17.9	18.0	17.9	17.5
% Oil.....	8.3	8.7	10.5	9.9	9.6

Source: Department of Fisheries, Vancouver Office.

TABLE 47
Canadian Supply & Disposition of Marine Oils
(millions of pounds)

	1962	1963	1964	1965	1966
Production.....	51.5	64.6	58.3	59.6	58.6
Imports.....	43.9	35.8	1.1	8.2	10.2
Exports.....	7.4	17.2	34.7	19.7	8.9
Apparent Domestic Disappearance.....	88.0	83.2	24.7	48.1	59.9

Source: Based on DBS data

TABLE 48
Canadian Imports of Marine Oils by Types
(millions of pounds)

	1962	1963	1964	1965	1966
Fish Liver & Visceral Oil.....	—	—	0.1	0.3	0.1
Fish & Marine Animal Oil.....	42.1	24.2	1.0 ⁽¹⁾	7.9	10.1
Whale & Spermaceti.....	0.9	0.6	—	—	—
Cod Liver Oil.....	0.9	1.0	—	—	—
Total.....	43.9	25.8	1.1	8.2	10.2
Total Value (thousands of \$).....	2,112	1,707	.168	.862	.863

Source: DBS Cat. No. 65-007

(1) Includes Whale Oil, previously included in Class 2297; Change in classification.

TABLE 49

Canadian Exports of Marine Oils by Types

(millions of pounds)

	1962	1963	1964	1965	1966
Herring Oil	(1)	1.0	23.3	7.6	0.8
Cod Liver Oil, Sun Rotted	5.9	10.0	7.0	5.1	4.5
Fish and Marine Animal Oil, N.E.S.	(1)	1.3	1.1	2.5	2.2
Whale Oil	1.3	4.9	3.2	4.5	1.4
Fish Liver & Visceral Oils	(1)	(1)	(1)	(2)	(2)
Total	7.4	17.2	34.7	19.7	8.9
Total value (thousands of \$)504	1,067	2,993	1,929	.798

Source: Based on DBS No. 65-004

(1) Less than 50,000 pounds.

(2) Fish Liver and Visceral Oil not listed after 1964.

TABLE 50

Use of Marine Oils in Margarine and Shortening

Year	Used in Margarine (mil. lbs.)	Per Cent of Total Fats in Margarine	Used in Shortening (mil. lbs.)	Per Cent of Total Fats in Shortening	Total Marine Oils in Margarine & Shortening (mil. lbs.)	Per Cent of Total Fats in Margarine & Shortening
1960	12	9.1	8	4.5	20	6.0
1961	32	21.3	17	10.2	49	13.9
1962	48	32.2	22	11.9	70	19.0
1963	65	46.6	23	12.4	88	24.7
1964	30	21.0	13	7.0	43	11.7
1965	30	22.1	15	7.7	45	12.6
1966	(1)	(1)	(1)	(1)	48	13.3

Source: Based on DBS data.

(1) Individual figures not available for 1966 due to a change in reporting procedure.

TABLE 51
Canadian Production of Fish Meals by Type and Area
(thousands of tons)

	1962	1963	1964	1965	1966
Atlantic Coast					
Groundfish	33.4	28.4	25.3	42.8	41.6
Herring	4.4	4.7	6.2	12.8	27.5
Other	—	0.6	0.6	0.9	1.5
Atlantic Total	37.8	33.7	32.1	56.5	70.6
Pacific Coast					
Herring	40.5	51.8	44.0	40.1	27.2
National Total	78.3	85.5	76.1	96.6	97.8

Source: Based on DBS Cat. No. 24-002

TABLE 52
Canadian Supply and Disposition of Fish Meal
(thousands of tons)

	1962	1963	1964	1965	1966
Production	78.2	85.5	76.6	96.6	97.8
Imports	0.2	3.0	4.9	0.1	(1)
Exports	47.4	55.6	62.5	58.9	52.9
Apparent Domestic Disappearance	31.0	32.9	19.0	37.8	44.9

Source: Based on DBS data.

(1) Less than 50 tons.

Table 53**Canadian Imports of Fish Meal**

(thousands of tons)

<u>Country of Origin</u>	1962	1963	1964	1965	1966
Peru.....	—	2.7	—	—	—
United States of America.....	0.2	0.1	0.1	0.1	(1)
Republic of South Africa.....	—	0.2	4.8	—	—
Total.....	0.2	3.0	4.9	0.1	(1)
Total Value (thousands of \$).....	19	327	552	10	1

(1) Less than 50 tons

Source: DBS Cat. No. 65-007

TABLE 54**Canadian Exports of Fish Meal and Condensed Solubles**

(thousands of tons)

	1962	1963	1964	1965	1966
Herring Meal & Pilchard Meal.....	36.7	45.2	50.5	40.1	36.7
Fish Meal, N.E.S.	10.7	10.4	12.0	18.8	16.3
Fish Condensed Homogenized Solubles.....	1.7	2.2	1.9	1.8	1.6
Total (Meal Only).....	47.4	55.6	62.5	58.9	53.0
Total Value (Meal Only) (thousand \$).....	6,509	7,677	8,851	9,336	9,379

Source: Based on DBS Cat. No. 65-004

TABLE 55

Canadian Imports of Tallow⁽¹⁾

(thousands of pounds)

<u>Country of Origin</u>	1962	1963	1964	1965	1966
Sweden	111	14	—	—	—
Australia.....	662	—	7	—	—
New Zealand	11	—	—	—	—
United States	<u>4,169</u>	<u>5,234</u>	<u>8,673</u>	<u>8,007</u>	<u>7,002</u>
Total	4,953	5,247	8,680	8,007	7,002
Total Value (thousands of \$).....	475	518	799	915	802
Average Price (cents per pound).....	9.6	9.9	9.2	11.4	11.4

⁽¹⁾ Until 1963 tallow was imported as Class No. 2308, and changed to Class No. 39-126 in 1964.

Source: DBS, Trade of Canada.

TABLE 56
Canadian Exports of Inedible Tallow
(thousands of pounds)

<u>Destination</u>	1962	1963	1964	1965	1966
United Kingdom.....	14,521	39,029	59,954	44,907	41,686
Italy	1,839	—	2,040	1,520	2,684
Netherlands	12,432	5,278	654	13,500	16,649
Iran	—	1,756	1,926	—	1,279
Ghana.....	—	1,291	1,164	2,679	3,261
Southern Rhodesia	—	—	473	—	—
Republic of South Africa.....	2,215	2,745	5,377	13,252	9,482
Malaysia.....	—	200	100	—	—
Japan	18,303	22,946	23,754	25,456	19,944
Korea	—	—	110	—	—
Guiana	—	—	126	457	717
Colombia	1,616	610	250	100	—
Ecuador	993	2,261	3,515	8,247	1,852
Venezuela	—	—	221	—	—
Barbados	517	285	895	1,075	1,040
Leew.-Wind. Is.....	239	202	148	263	204
Trinidad-Tobago.....	380	670	886	3,607	3,235
Cuba.....	33,635	22,952	35,577	14,277	19,781
El Salvador	—	2,829	103	2,067	899
United States.....	1,676	1,179	598	354	969
Germany, West.....	—	—	—	2,170	660
Spain.....	—	—	—	998	—
Switzerland	—	—	—	638	—
Thailand.....	—	22	—	—	—
Rhodesia and Nyasaland.....	—	1,347	—	—	—
Jamaica	3,562	1,568	—	—	—
Belgium	599	—	—	—	—
Dominican Republic.....	100	401	—	—	—
Nicaragua.....	50	—	—	—	—
Portugal.....	—	662	—	—	—
Surinam.....	—	—	—	—	8
Pakistan.....	—	—	—	—	11,957
Total.....	92,676	108,233	137,872	135,564	136,308
Total Value (thousands of \$)	6,144	7,237	10,760	12,512	11,846

Source: DBS, Trade of Canada.

TABLE 57
Canadian Imports of Lard⁽¹⁾
(thousands of pounds)

<u>Country of Origin</u>	1962	1963	1964	1965	1966
United States	24,784	17,133	16,001	20,734	28,439
Total	24,784	17,133	16,001	20,734	28,439
Total Value (thousands of \$)	2,506	1,491	1,647	2,564	3,428
Average Price (cents per pound)	10.1	11.5	10.3	12.3	12.1

Source: DBS, Trade of Canada.

(1) Until December 1962 this class comprised "Lard and Compounds Stearine".

TABLE 58
Canadian Imports of Grease, Including Wool Grease and Lanolin⁽¹⁾
(thousand of pounds)

<u>Country of Origin</u>	1962	1963	1964	1965	1966
United Kingdom	352	223	443	462	277
Ireland	—	—	22	—	—
Germany, West	23	72	74	63	—
Australia	—	—	49	107	169
United States	21,472	29,582	32,001	14,672	9,898
Japan	—	—	—	5	12
Total	21,846	29,877	23,589	15,308	10,356
Total Value (thousands of \$)	1,422	1,962	1,939	1,558	998

Source: DBS, Trade of Canada.

(1) Until 1963 this class was listed as No. 2304: Grease and Degras, and has appeared under the above description from 1964 as No. 391-15.

TABLE 59

Canadian Imports of Animal Oils and Fats(1)

(thousands of pounds)

<u>Country of Origin</u>	1962(2)	1963	1964	1965	1966(3)
Poland	—	—	2	—	2
United States	1,825	3,117	1,335	748	796
United Kingdom	12	8	—	12	—
Australia	—	59	—	10	6
Belgium/Luxembourg	17	11	—	—	—
Ireland	—	29	—	—	—
Total	1,881	3,224	1,337	771	804
Total Value (thousands of \$)	192	416	174	124	159

(1) Import class #39-199 contains the following items: chicken fat, lard oil, neatsfood oil, animal stearine and tallow oil.

(2) Until 1963, this class #39-199 was imported largely as class #2293, Animal Oil nop, consisting primarily of inedible grades of animal and chicken fats.

(3) In addition to the reported amounts, Canada imported 300 lbs of product valued at \$2,000 from France in 1966.

Source: DBS, Trade of Canada.

TABLE 60
Canadian Exports of Animal Oils and Fats
(thousands of pounds)

<u>Destination</u>	1962	1963	1964	1965	1966
United Kingdom	289	228	553	332	430
Belgium/Luxembourg	—	(1)	(1)	—	—
Germany, West	1	1	2	—	—
Netherlands	—	438	—	—	—
Norway	—	—	—	—	32
Spain	—	844	—	—	—
Japan	925	551	—	915	—
Bermuda	—	(1)	—	—	—
Jamaica	6	27	—	46	16
Trinidad — Tobago	—	—	—	—	10
Leew.-Wind. Is.	—	(1)	—	—	—
Guiana	—	—	—	—	56
Cuba	66	(1)	—	—	—
United States	728	1,411	772	482	4,567
Italy	1,514	—	650	—	—
Colombia	36	—	—	—	—
Finland	—	—	41	—	—
Bahamas	—	—	1	—	—
Total	3,592	3,501	2,019	1,775	5,110
Total Value (thousands of \$)	216	171	159	129	220

(1) Less than 500 lbs .

Source: DBS, Trade of Canada.

Comments to Table 61

As a result of increased coverage by the Dominion Bureau of Statistics, it is not possible to compare all this production data for 1966 with previous years. DBS is at present engaged in reorganising its method of collecting information on fats and oils production, and a great improvement in accuracy and reliability can be expected when all statistics for 1967 have been gathered.

Margarine production increased by 8.5 per cent to 181 million pounds in 1966, reversing the downward trend of recent years. In the United States, margarine consumption also reached a new peak of more than 10 pounds per capita and about twice the per capita butter consumption. Canadian per capita margarine consumption in 1966 was 8.9 pounds and 16.6 pounds for butter. Butter production declined by 5 per cent from 352 million pounds in 1965 to 334 million pounds in 1966.

Packaged shortening consumption remained at 50 million pounds in 1966, while bulk shortening consumption seemed to have risen to 203 million pounds. It is likely that previous to 1966 the figures did not include total Canadian production.

Salad and cooking oil production also seems to have grown significantly in 1966 to 128 million pounds from 75 million pounds in 1965. Again, the new procedure of data collection may have been more accurate.

Lard production dropped as a result of smaller slaughter volume.

TABLE 61
Canadian Production of Specified Oils & Fats Products

(Millions of Pounds)

	1962	1963	1964	1965	1966
Margarine	187	172	175	167	181
Creamery Butter	362	352	352	352	334
Shortening					
Package	52	54	54	51	50
Bulk	129	130	139	140	203(1)
Refined Oils					
Coconut	20	17	15	15	(2)
Salad & Cooking	69	78	72	74	128
Lard	99	100	108	97	86
Tallow					
Edible	37	42	50	50	48
Inedible	164	174	199	204	194
Grease, other than white	5	5	6	5	3
Other fats and oils(3)	6	8	8	7	10

(1) Packages over 20 pounds in 1966.

(2) Included with shortening oils starting in 1966.

(3) Includes white grease, neatsfoot oil, oleo oil, oleo stearine, oleo stock, etc.

Source: DBS, No 32-006

Comments to Tables 62 and 63

Similar to the comments made under Table 61, the new data collection procedure of DBS included more companies and 1966 figures cannot be compared with those of previous years.

However, a significant reduction in the volume of soybean oil used in margarine manufacture has become apparent, while at the same time the use of "other oils" has increased. "Other oils" include particularly rapeseed oil. According to Table 63, more than 102 million pounds of rapeseed oil were used in the various finished products in 1966. It is safe to assume that more than 30 million pounds each were used in the manufacture of margarine and salad and cooking oils, apart from the 37 million pounds consumed in the production of shortening.

The significant aspect of the consumption of refined oils in margarine and shortening, Table 62, was the increased use of vegetable oils, while animal and marine oil consumption underwent only minor changes. As can be seen from Tables 1, 2 and 3 Canadian imports of vegetable oils increased at a similar rate, without any change in exports. Domestic production of vegetable oils increased too. Consequently, it may be concluded that per capita visible fats and oils consumption increased significantly by at least two pounds in 1966. Data published by USDA concerning American fats and oils consumption also indicate an increase of about three pounds.

TABLE 62
Canadian Consumption of Refined Oils and Fats in Margarine & Shortening
(thousands of pounds)

	1962	1963	1964	1965	1966(1)
Margarine					
Vegetable Oils					
Coconut.....	13,353	3,543	822	336	(2)
Cottonseed.....	3,115	2,839	3,580	3,581	(2)
Palm.....	13,241(3)	6,178	5,665	6,400	(2)
Soybean.....	55,192	46,933	81,070	67,196	57,514
Other (4).....	11,814	12,652	15,079	20,500	52,753
Total.....	96,715	72,145	106,216	98,013	110,267
Marine Oils.....	48,293	64,555	29,734	30,026	(5)
Animal Oils					
Lard.....	7,470	1,733	5,953	7,902	(2)
Edible Tallow.....	(6)	(6)	20	—	(2)
Other.....	45	10	—	—	(2)
Total.....	7,515	1,743	5,973	7,902	(5)
Grand Total.....	152,523	138,443	141,923	135,941	145,964
Shortening					
Vegetable Oils					
Coconut.....	2,238	2,347	2,660	2,590	(2)
Cottonseed.....	7,448	7,264	9,205	12,138	(2)
Palm.....	19,033(3)	12,911	9,853	9,414	15,435
Soybean.....	52,180	55,324	62,596	59,685	64,559
Other (4).....	21,151	24,392	23,661	25,702	88,458
Total.....	102,050	102,238	107,975	109,529	168,452
Marine Oils.....	21,553	22,855	13,486	14,726	(5)
Animal Oils					
Lard.....	24,367	23,206	27,198	23,536	(2)
Edible Tallow.....	30,415	33,322	42,813	42,348	(2)
Other.....	3,222	2,937	1,281	1,236	(2)
Total.....	58,004	59,465	71,292	67,120	(5)
Grand Total.....	181,607	184,558	192,753	191,375	252,897

(1) DBS coverage included more firms than in previous years, and figures can be compared with previous years to limited extent only. See Table 63.

(2) Confidential

(3) Includes palm kernel oil in 1962.

(4) Includes corn oil, palm kernel oil, peanut oil, rapeseed oil, sunflower seed oil and blends until 1965, and all vegetable oils except for soybean oil in 1966.

(5) A total of 48.4 million pounds of marine oils and 71.8 million pounds of animal fats were used in margarine and shortening manufacture in 1966.

(6) Included in "other".

Source: DBS No. 32-006

TABLE 63

**Refined Fats and Oils Used in the Production of Packaged Margarine,
Shortening, Salad and Cooking Oils in 1966**

	Margarine (packaged only)	Shortening and shortening oils (thousands of pounds)	Salad and cooking oils	Total
Vegetable oils:				
Coconut.....	(1)	(1)	(1)	24,152
Corn.....	(1)	(1)	(1)	27,533
Cottonseed.....	(1)	(1)	(1)	28,698
Palm	(1)	15,435	(1)	22,333
Palm kernel	—	(1)	—	8,260
Peanut.....	(1)	(1)	(1)	15,457
Rapeseed	(1)	37,453	(1)	102,331
Soyabean.....	57,514	64,559	30,024	152,097
Sunflowerseed	(1)	(1)	(1)	15,030
Other (including blends).....	(1)	(1)	(1)	9,859
Total vegetable oils	110,267	168,452	127,031	405,750
Marine oils:	(1)	(1)	(2)	48,391
Animal oils:				
Lard.....	(1)	(1)	—	25,467
Oleo stearin.....	—	(1)	—	(1)
Tallow — Edible	(1)	(1)	—	44,958
Other	—	(1)	—	(1)
Total animal oils.....	(1)	(1)	—	71,751
Total consumption in manufacturing.....	145,964	252,897	127,031	525,892

(1) Confidential.

(2) Very small amount included with "Shortening".

Source: DBS No. 32006

Table 64

Canadian Imports of Margarine and Shortening

(thousands of pounds)

Country of Origin	1963	1964	1965	1966
United Kingdom	438	60	112	—
Sweden	144	264	156	180
United States	3,864	4,804	3,258	4,316
Germany, West	1	—	—	—
Total	4,447	5,129	3,526	4,496
Total Value (thousands of \$).....	805	910	721	935

Source: DBS, Trade of Canada.

TABLE 65

Canadian Exports of Margarine, Shortening & Lard⁽¹⁾

(thousands of pounds)

Destination	1962	1963	1964	1965	1966
United Kingdom	—	0.3	—	0.9	—
Netherlands	—	3.6	8.4	14.3	16.0
Cuba	—	44.6	—	0.4	—
Bahamas	0.3	1.7	1.0	—	—
Bermuda	23.5	37.3	43.1	68.2	55.4
St. Pierre	3.0	14.3	32.7	48.3	91.2
Barbados.....	0.7	0.7	—	—	—
Jamaica.....	0.6	15.8	14.3	11.0	—
United States	2.5	2.6	4.4	4.0	5.1
Leew.-Wind. Is.	—	—	0.4	—	—
Norway	—	—	—	0.2	—
Japan.....	—	—	—	21.0	59.7
Total	30.6	120.9	104.3	168.3	228.0
Total Value (thousands of \$).....	7	30	27	42	61

(1) Includes lard starting in 1966.

Source: DBS, Trade of Canada.

TABLE 66

Canadian Trends in Butter Fat Production and Utilization

(millions of pounds)

	Total Milk Production		Butter Fat Utilization			
	Fluid Milk	Butter Fat Equivalent(1)	Manufactured Dairy Products(2)	Fluid Milk Sales(3)	Farm Home Consumed	Fed on Farms
1962.....	18,382	643	405	174	33	31
1963.....	18,432	645	406	176	33	30
1964.....	18,505	647	407	179	32	29
1965.....	18,360	642	402	182	31	27
1966.....	18,375	643	404	184	30	25

Butter Fat Utilization in Manufactured Dairy Products(4)

	Total		Creamery Butter		Cheese(5)		Concentrated Whole Milk Products		Ice Cream Mix	
1962.....	399	296	50	33	19					
1963.....	400	288	60	35	17					
1964.....	403	288	56	35	17					
1965.....	399	276	69	35	19					
1966.....	401	274	74	30	22					

Source: Based on DBS data.

(1) Fat content of milk based on conversion rate of 3.5

(2) Includes creamery butter, cheddar cheese, other cheese, concentrated whole milk products, ice cream mix and also a relatively small volume of farm butter.

(3) Fluid sales represent whole milk sales from farms for use in cream and milk.

(4) Farm butter excluded.

(5) Includes mainly cheddar cheese, and also other cheese made from whole milk and cream, but excludes creamed cottage cheese.

Comments to Table 66

In order to assess the position of dairy fat within the pattern of Canadian fats and oils consumption, trends in the butter fat production and utilization on a fat basis have been examined. Table 66 shows that milk output, and therefore also milk fat, production has been very stable for the past 5 years. With regard to utilization, Manufactured Dairy Products account for over 60% of butter fat consumption and also showed no change during the past 5 years. However, the breakdown of this category shows a 7.5% reduction in butter production between 1962 and 1966, amounting to a drop of 22 million pounds as butterfat. On the other hand, cheese production has grown by 49% during this period, utilizing an additional 24 million pounds of butterfat.

The only other areas showing an increase in butterfat consumption are Fluid Milk Sales, where the increase is nearly in line with population growth, and Ice Cream Mix production, where the growth exceeds the population expansion.

TABLE 67

**Canadian Imports of Vegetable Cooking Fats
and Packaged Salad Oils**

(thousands of pounds)

<u>Country of Origin</u>	1964	1965	1966
United Kingdom	561	694	480
Sweden	78	111	127
Hong Kong	—	—	—
United States	3,503	8,448	7,107
Total	4,143	9,254	7,714
Total value (thousands of \$)	992	2,517	2,050
Average price, cents per pound	23.9	27.2	26.6

Source: DBS, Trade of Canada.

This class was established in 1964 as #39385 and includes vegetable cooking fats and packaged salad oils, a group called lard substitutes, but not shortenings.

TABLE 68

Canadian Production of Salad Dressings and Mayonnaise

(millions of pounds)

	1961	1962	1963	1964	1965	1966
1st Quarter	8.8	9.3	10.0	10.6	13.0	12.7
2nd Quarter	13.9	14.3	16.4	17.3	17.2	19.7
3rd Quarter	8.8	10.0	9.1	9.1	10.9	14.7
4th Quarter	<u>6.6</u>	<u>7.0</u>	<u>8.1</u>	<u>9.0</u>	<u>9.8</u>	<u>10.5</u>
Total	38.1	40.6	43.6	46.0	50.8	57.7

Source: DBS No. 32-018, and 32-007 prior to 1962.

TABLE 69**Canadian Production of Sandwich Spreads⁽¹⁾**

(thousands of pounds)

	1961	1962	1963	1964	1965	1966
1st Quarter	947	918	1,138	981	1,173	1,661
2nd Quarter	1,012	1,230	1,147	1,391	1,332	1,376
3rd Quarter	971	922	780	1,024	1,077	1,260
4th Quarter	<u>947</u>	<u>844</u>	<u>998</u>	<u>1,023</u>	<u>988</u>	<u>1,283</u>
Total	3,877	3,914	4,063	4,418	4,570	5,581

Source: DBS No. 32-018, and 32-007 prior to 1962.

(1) Excluding meat and poultry paste.

TABLE 70**Canadian Production of Peanut Butter**

(millions of pounds)

	1961	1962	1963	1964	1965	1966
1st Quarter	10.6	10.1	10.5	12.0	12.9	13.0
2nd Quarter	9.7	10.7	10.0	11.7	10.5	11.9
3rd Quarter	8.7	8.8	10.3	11.1	11.1	10.0
4th Quarter	<u>8.6</u>	<u>9.4</u>	<u>8.6</u>	<u>10.4</u>	<u>11.1</u>	<u>11.2</u>
Total	37.6	39.0	39.4	45.2	45.5	46.2

Source: DBS No. 32-018, and No. 32-007 prior to 1962.

TABLE 71

Average Retail Prices for Canada for Certain Fats (Cents)

1962 – 1966

	1962	1963	1964	1965	1966	Jan.*	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Margarine, lb.	29.6	28.0	29.3	33.9	36.0	34.5	34.9	35.1	35.7	36.0	36.0	36.3	36.4	36.2	36.7	37.1	37.0
Shortening, lb.....	34.9	34.6	35.9	38.7	40.9	40.0	40.3	40.7	41.0	40.6	40.8	41.0	41.0	41.2	41.7	41.4	41.2
Lard, pure, lb.....	22.5	22.8	23.7	27.2	30.1	29.4	29.8	30.5	30.8	30.8	30.2	29.9	29.7	29.7	30.0	30.2	30.0
Salad Dressing Jar, 16 oz. .	42.6	42.6	42.6	44.0	44.4	44.5	44.6	44.3	44.3	44.6	44.3	44.5	44.5	44.5	44.3	44.3	44.6
Butter, creamery,																	
first grade, 1 lb.	62.1	58.5	58.9	61.4	67.1	62.8	65.3	65.3	67.1	67.5	67.2	67.3	67.5	67.3	69.4	69.1	69.0

Source: DBS, Prices & Price Indexes, No. 62-002.

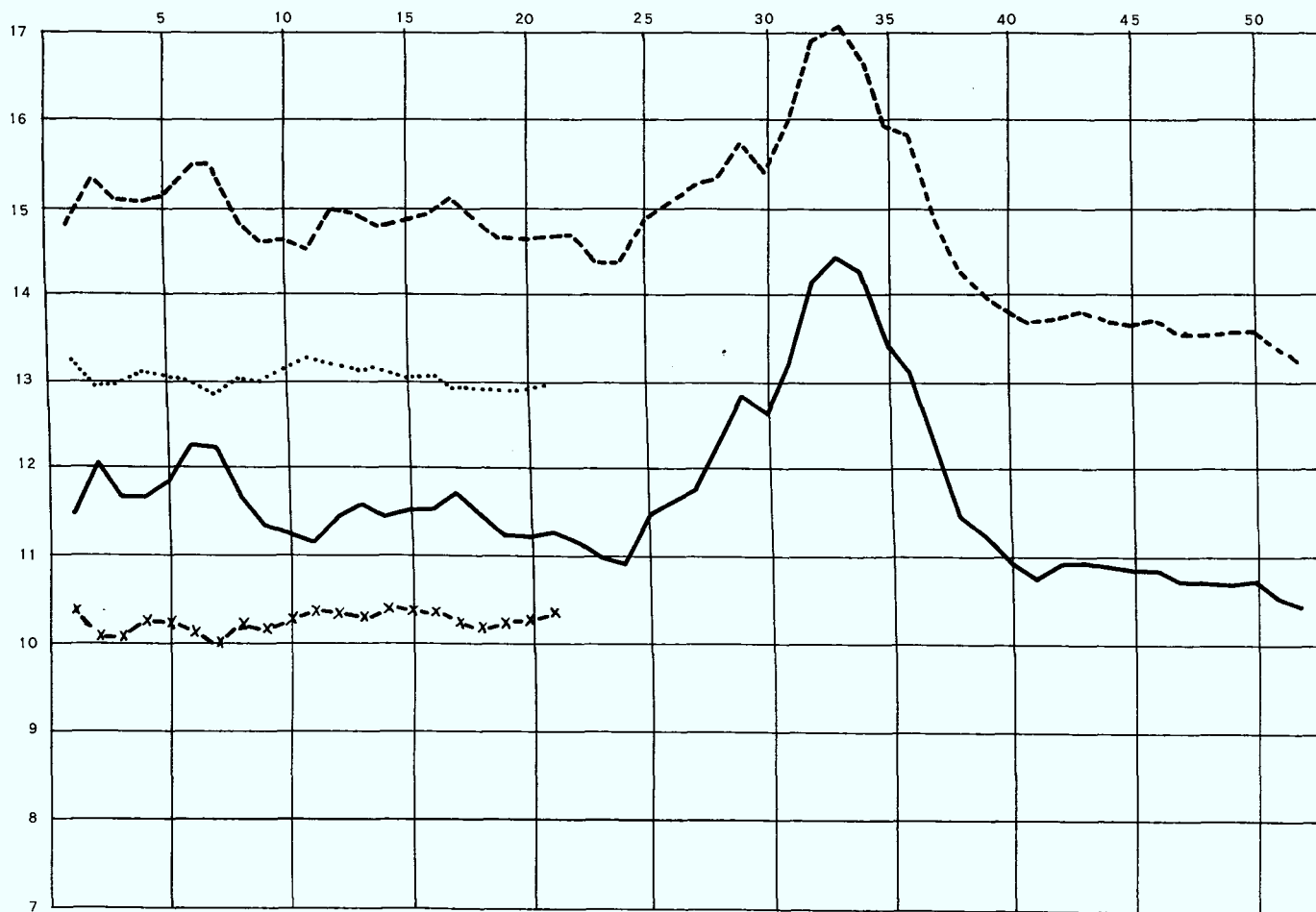
* The months cover the year 1966.

— Soybean Oil, U.S., 1966

- - - Soybean Oil, Canada, 1966

x - x - x - Soybean Oil, U.S., 1967

..... Soybean Oil, Canada, 1967

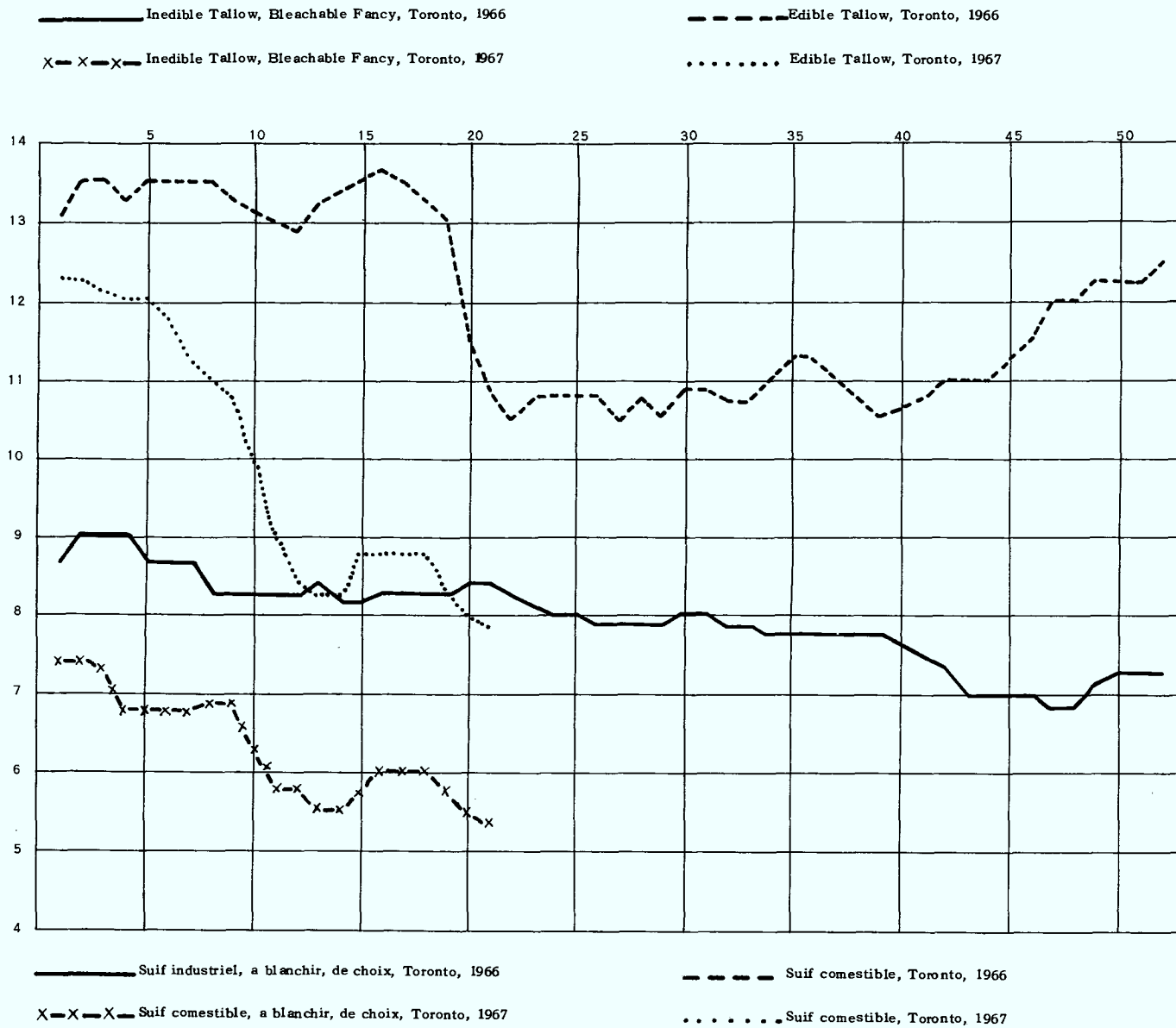


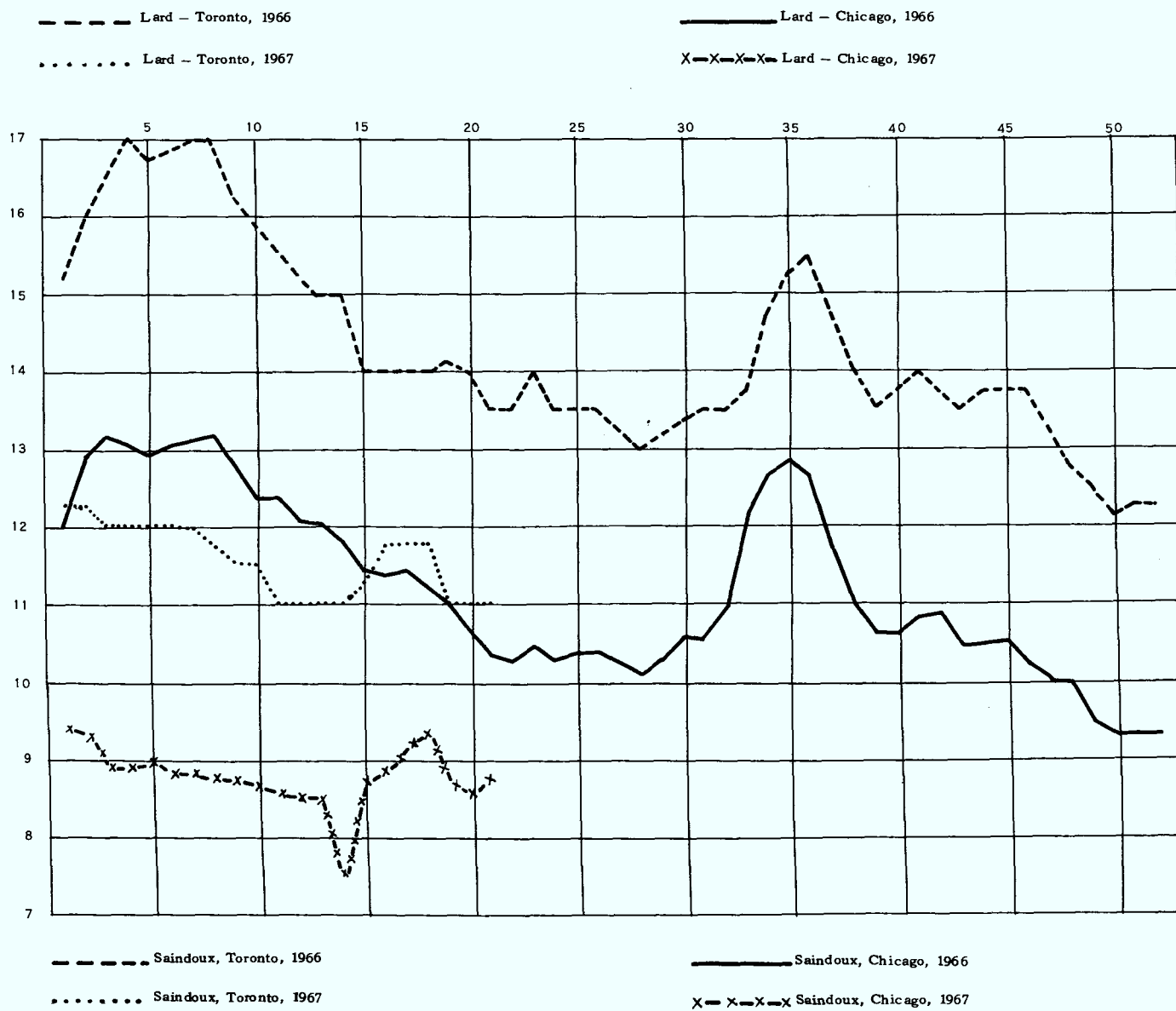
— Huile de soya, E.-U., 1966

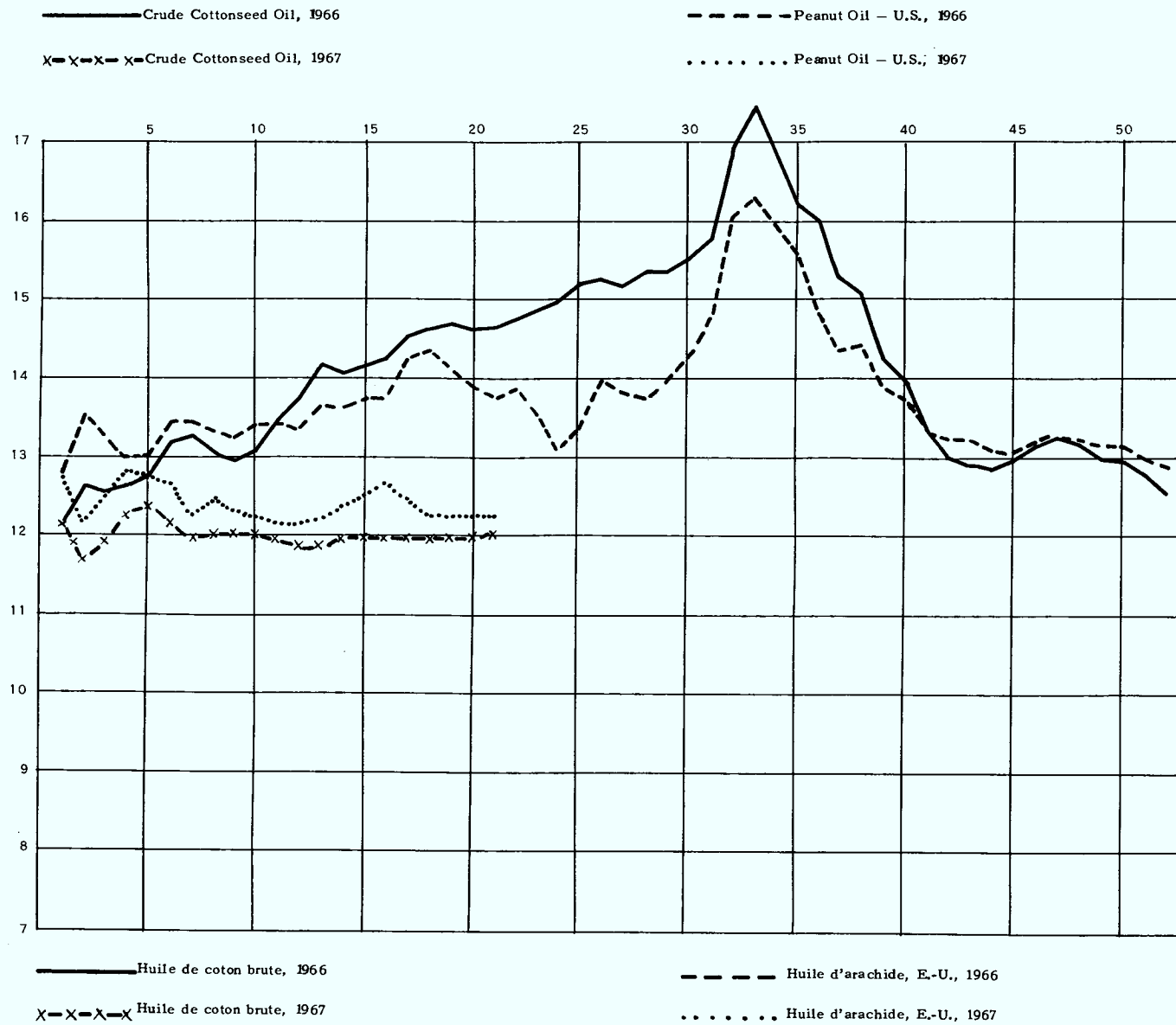
- - - Huile de soya, Canada, 1966

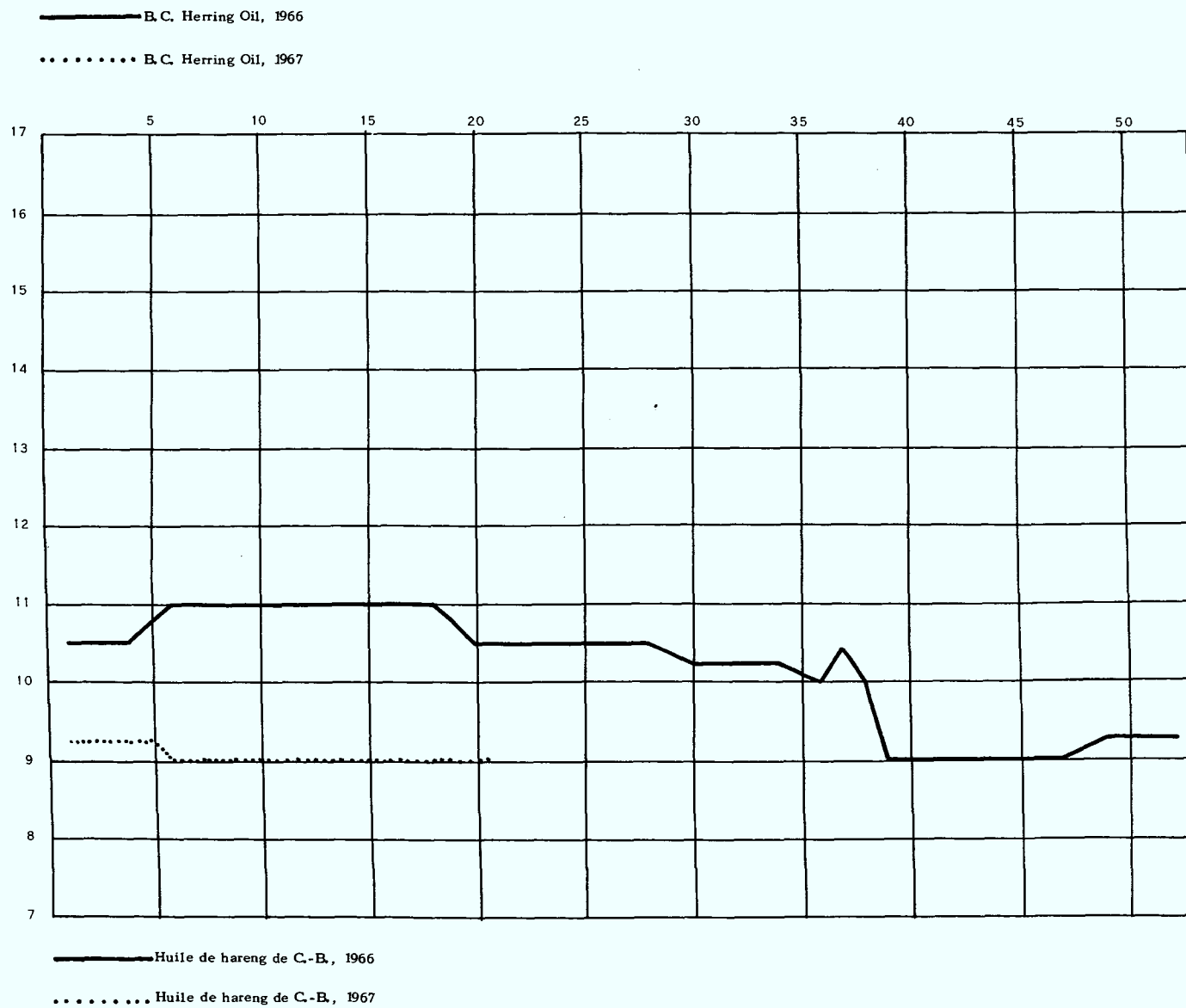
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..... Huile de soya, Canada, 1967









NEW RECOMMENDATIONS REGARDING CANADIAN OILSEED CROPS

Sixth Report of the House of Commons
Standing Committee on Agriculture,
Forestry and Rural Development.

Mr. E. F. Whelan, M. P., presented the Sixth Report of the Standing Committee on Agriculture, Forestry and Rural Development to the House of Commons on May 8, 1967.

The following recommendations are of particular concern to the producers of oilseed as well as to the processing industries.

Jurisdiction of the Canadian Wheat Board

Evidence suggested that the jurisdiction of the Canadian Wheat Board should be extended so as to allow the Board to handle the marketing of rye, flax and rapeseed. This proposition would appear to have general support throughout the West. The Canadian Wheat Board, when it appeared before the Committee, pointed out that if the Board were to assume marketing responsibility for rye, flax and rapeseed an amendment to the Canadian Wheat Board Act would be required. The Board also stated that if such an amendment were passed that it was confident that it could handle the added responsibility.

Your Committee understood, however, that a very different type of marketing operation would be necessary to handle the marketing of flax and rapeseed. If the marketing powers of the Board were extended to cover flax and rapeseed it would, in effect, involve the establishment of a completely new operation within the Board.

After due consideration of the representations made, the Committee feels that an extension of the Wheat Board jurisdiction into this area could be beneficial for the producer.

This opinion has been reached for the following reasons. First, the Canadian Wheat Board now regulates the delivery of rye, flax and rapeseed to country elevators and because of this the producer is frequently not able to act quickly enough to take advantage of the changing market prices. Second, a single well-established selling agency would insure uniform delivery arrangements and give the Canadian producer the considerable marketing experience of the Canadian Wheat Board. Third, Canadian Wheat Board control would in all likelihood encourage diversity of prairie grain production, something that should in the long run prove very healthy for the grain industry.

Your committee therefore recommends that legislation be introduced, after the usual procedures have been complied with, that would extend the jurisdiction of the Canadian Wheat Board so that it would be the sole Canadian marketing agency for rye, flax and rapeseed.

Oilseeds

Your committee had impressed upon it, by one of its members and many witnesses, the importance of rapeseed. Rapeseed is one crop that grows better in Western Canada than in any other part of the world. However, if any greater amount were grown in Canada it is very likely that prices would be drastically affected unless the total market were enlarged.

It is your committee's view that domestic oilseeds could be used more extensively as a primary oil in Canada. If this were to happen, more rapeseed could be grown on the prairies and fewer Canadian dollars would leave Canada to import corn and soybean oil.

It is your committee's recommendation that the Oilseed Institute be urged to initiate additional research on rapeseed and that the institute be encouraged to promote the production and marketing of rapeseed and its by-products.

KENNEDY ROUND RESULTS

Trade Minister Robert Winters and Finance Minister Sharp released details of the trade agreements reached under the Kennedy Round of GATT negotiations signed in Geneva on June 30, 1967.

Below are listed tariffs and tariff changes of interest to Canada's fats and oils and oilseed meal industries:

- a) The Canadian concessions regarding Most Favored Nation tariffs are of greatest importance. Since the "General Tariffs" are of negligible significance to this industry, and since British Preferential Tariffs are free, these have not been included. It will be noted that the recommendations made in the Report by the Tariff Board, Reference No. 131, in 1963, have now been adopted. Crude oils, including rapeseed oil, will in most cases enter Canada at a 10% rate, and a rate of 17.5% will apply to most refined oils.
- b) The United Kingdom will gradually eliminate the NFN duty of 5% on soybeans and reduce the rate on soybean meal from 15% to 10%. The duty on soybean oil will not be changed. Consequently Canadian beans will lose their advantage, while the oil and meal will remain protected.
- c) A significant aspect of the Japanese concessions is the reduction of the duty on soybeans from 13% to 2 yen 40 sen per kg, while the rate on rapeseed will remain at 6 yen 10 sen per kg. Safflower seed duty also was reduced by 50% from 5% to 2.5%.
- d) The United States did not change the \$6 per ton duty on soybean meal. The duty on linseed meal was reduced from 1/4 cent per pound to 1/8 cent.

CANADIAN TARIFF CONCESSIONS

(Most Favored Nation)

Tariff Item Number	Description	Base	Concession
1300-1	Lard and animal stearine of all kinds n.o.p. (per lb.)	1.75¢	1 ¢
1305-1	Lard compound and similar substances n.o.p. (per lb.)	1.75¢	1 ¢
1400-1	Tallow	17.5 %	10 %
2005-1	Butter produced from the cocoa bean (per lb.)	2.25¢	Free
2010-1	Illipe butter	10 %	Free
2015-1	Shea butter	10 %	Free
13300-2	Fish solubles	17.5 %	Free
25800-1	Linseed and flaxseed oil, raw or boiled (per lb.)	1.55¢	10 %
25805-1	Linseed and flaxseed oil, other than raw or boiled	20 %	17.5%(1)
25900-1	Lard oil and neat's foot oil	22.5 %	17.5%
25915-1	Castor oil, crude	Free	Free (1)
26505-1	Fish oils, n.o.p.	20 %	15 %
26505-2	Menhaden oil	17.5 %	15 %
26515-1	Halibut liver oil, crude or refined	20 %	15 %
26605-1	Tung or china wood oil	Free	Free
27600-1	Mustardseed	7.5 %	Free(1)
27605-1	Rapeseed	7.5 %	Free(1)
27610-1	Sesameseed	2.5 %	Free(1)
27615-1	Sunflowerseed	5 %	Free(1)

Oilcake and Oilcake meal — including pellets or other shapes:

27701-1	Cottonseed	Free	Free(1)
27702-1	Linseed	Free	Free(1)
27703-1	Peanut	5 %	Free(1)
27704-1	Soybean	Free	Free(1)
27705-1	All other, of vegetable origin	Free	Free(1)

Vegetable oils, crude or crude degummed:

27711-1	Cocoanut	10 %	10 %(1)
27712-1	Corn	20 %	10 %(1)
27713-1	Cottonseed	10 %	10 %(1)
27714-1	Palm	10 %	10 %(1)
27715-1	Palm Kernel	10 %	10 %(1)
27716-1	Peanut	10 %	10 %(1)
27717-1	Rapeseed	Free	10 %(1)
27718-1	Soybean	20 %	10 %(1)
27719-1	Sunflowerseed	10 %	10 %(1)

Vegetable oils, other than crude or degummed:

27731-1	Cocoanut	17.5 %	17.5%(1)
27732-1	Corn	20 %	17.5%(1)
27733-1	Cottonseed	17.5 %	17.5%(1)
27734-1	Palm	20 %	17.5%(1)
27735-1	Palm Kernel	20 %	17.5%(1)
27736-1	Peanut	20 %	17.5%(1)
27737-1	Rapeseed	Free	17.5%(1)
27738-1	Soybean	20 %	17.5%(1)
27739-1	Sunflowerseed	10 %	17.5%(1)
27740-1	All other, n.o.p. and mixtures of vegetable oil n.o.p.	20 %	17.5%(1)
27800-1	Soybean oil for use in the manufacture of paint and varnishes	Free	Free(1)
27805-1	Vegetable oils for use in canning fish	Free	Free(1)
27810-1	Olive oil	Free	Free(1)
27815-1	Cashew nut shell oil	Free	Free(1)
27820-1	Soapstocks of vegetable origin with a moisture content of 50% or more by weight, and acid oils of vegetable origin with a free fatty acid content of less than 90% by weight	-	10 %(1)
66335-1	Fish meal	20 %	10 %
93805-1	Tall oil	Free	15 %(1)

(1) - These changes are to be implemented in a single step, i.e. the final rate of duty will be put into effect not later than July 1, 1968. Others will be staged over a period not exceeding four years beginning January 1, 1968. The difference between the base rate and the final rate will be reduced by not less than one-fifth on January 1 of each year starting January 1, 1968.

UNITED KINGDOM TARIFF CONCESSIONS

(Most Favored Nation)

	Base	Concessions
Soybeans	5%	Free(2)
Soybean meal	15%	10%(2)
Soybean oil	15%	No change

(2) The tariff on soybeans will be reduced as follows.

July 1, 1968	40% reduction
January 1, 1970	20% reduction
January 1, 1971	20% reduction
January 1, 1972	20% reduction

United States

	Linseed Meal (per lb.)	0.25 ¢	0.12¢
161.61	Mustard Seed (per lb.)	0.875¢	0.43¢
	Soya meal (per lb.)	.34 ¢	no change
175.51	Sunflower seed (per lb.)	0.8 ¢	0.4 ¢
177.56	Tallow (per lb.)	0.875¢	0.43¢

European Economic Community

15.02a	Tallow	2%	Free
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Japan

12.01	Oilseeds and oleaginous fruit, whole or broken		
12.01-1	Soybeans	13%	2 yen 40 sen/kg.
12.01-2	Ground nuts: for oil extraction	20% or 14 yen/kg.	Free
12-3	Rapeseed and Mustard seed	6 yen 10 sen/kg.	no concession
12-7	Safflower seeds	5%	2.5%
15.02	Unrendered fats of cattle, sheep or goats; tallow (Including "premier jus") produced from those fats:		
15.02-1	Beef tallow	4%	2.5%
15.02-1	Other	5%	2.5%
15.03	Lard stearin, oleostearin and tallow stearin; lard oil, oleo oil and tallow oil, not emulsified or mixed or prepared in any way.	15%	7.5%
15.04	Fats and oils of fish and marine mammals, whether or not refined:		
15.04-2	Whale oil	Free	Free
15.04-3	Liver oil	10%	5 %
15.04-4	Other	10%	5 %
15.07	Fixed vegetable oil: fluid or solid, crude refined or purified:		

15.07-1	Soybean oil	28 yen/kg.	no change
15.08	Animal and vegetable oils, boiled, oxidized dehydrates, sulfonated, blown or polymerized by heat in vacuum or in inert gas; or otherwise modified.	15%	7.5%
15.12	Animal or vegetable oils and fats, wholly or partly hydrogenized, or solidified or hardened by any other process, whether or not refined, but not further processed	15%	7.5%
15.14	Spermaceti, crude, pressed or refined, whether or not colored	15%	7.5%
38.05-1	Tall oil, crude	5%	2.5%

SELECTIVE HYDROGENATION OF FATTY OILS

The Canadian Patent Office Record of May 16, 1967 announced the issuing of a patent on the Selective Hydrogenation of Fatty Oils, number 759,051 to -

Albert de Jonge, Vlaardingen, Holland, and Jacob Erkelens, Dordrecht, Holland.

Granted to Unilever Limited, Port Sunlight, County of Chester, England.

Application August 10, 1965, Serial No. 937,783.

In Great Britain August 12, 1964 (32,778/64)

17 claims - class 260-409

No drawing.

1. A process for selectively hydrogenating oils containing linoleic acid in addition to more highly unsaturated fatty acids, so as to obtain improved keeping properties, wherein the oils are hydrogenated at a temperature of 150° to 225° C in the presence of a hydrogenation catalyst in which the active material is composed of copper to the extent of at least 70% by weight, in structural combination with a metal which is more highly active than copper, present to an extent sufficient to increase substantially the rate of hydrogenation, until the content of the more highly unsaturated fatty acids has been reduced while retaining at least 40% of the original content of linoleic acid, after which the hydrogenated oil is substantially freed from traces of catalyst.
12. Process according to claim 1 or 3, wherein the oil treated is earth-bleached soybean oil substantially free from phosphatides and containing not more than 0.8% of free fatty acid and not more than 0.4% by weight of moisture.

Fat Compositions and Their Preparation

The Canadian Patent Office Record of June 13, 1967 reported a new patent number 760,933, "Fat Compositions and Their Preparation", A. J. Haighton and A. Mijnders, V.E. Vlaardingen, Holland. Granted to Unilever Limited, Port Sunlight, County of Chester, England. Application July 13, 1963, Serial No. 880,088. In Great Britain July 16, 1962 (27 187/62)

9 Claims - Class 99-165

Patent describes process for preparing a liquid shortening, wherein a fat mixture having a solids content at 20° C of 5 to 35 % is converted from the molten condition to a slurry. The slurry is gradually cooled and comminuted, so that none of the particles has a dimension exceeding 15 microns.

FOREIGN INDUSTRIES REVIEW

United States Soybean Outlook

Soybean oil became the largest component of the world fats and oils production in 1966 with an estimated volume of 4,960,000 tons. Butter fat had previously been the leader, and now took second place with 4,660,000 tons. Thus soybean oil accounted for 13.1% of the total estimated world production of 37,683,000 tons (Table 4).

A further increase of soybean oil production to 5,380,000 tons is forecast for 1967, i.e. an increase of 420,000 tons. Sunflowerseed oil production is also expected to increase significantly from 2,795,000 tons to 3,100,000 tons. The expected increase in rapeseed oil production, largely as a result of increased plantings in E.C.C. countries, will amount to less than 100,000 tons, from 1,490,000 tons to 1,585,000 tons. No significant changes are expected in 1967 in the production of animal fats, marine and industrial oils. Consequently the growth in soybean oil production in the United States and of sunflowerseed oil production in the U.S.S.R. will primarily account for the estimated expansion of world production from 37.7 million tons in 1966 to 38.7 million tons in 1967.

It is estimated that the sum total of United States soybean crushings plus exports will be equivalent to 4,285,000 tons of soybean oil during the crop year 1966/67. On the basis of the expected soybean availabilities in the United States during the crop year 1967/68, the oil equivalent will reach approximately 10.7 billion pounds, i.e. 5,350,000 tons. By comparison, the oil potentially available from Canadian soybeans amounts to only about 85 million pounds.

Supply and Disposition of United States Soybeans

Item	Year beginning September			
	1964	1965	1966 ⁽¹⁾	1967 ⁽²⁾
Supply & Disposition	Million bushels			
Supply				
Beginning Stocks, Sept. 1.....	67.3	29.7	35.6	100-110
Production.....	<u>700.9</u>	<u>845.6</u>	<u>931.5</u>	<u>1,000⁽³⁾</u>
Total Supply.....	768.2	875.3	967.1	
Disposition				
Crushings.....	479.0	537.5	550	
Exports.....	212.2	250.6	250-260	
Seed, Feed and Residual.....	<u>47.3</u>	<u>51.5</u>	<u>57</u>	
Total Disposition.....	738.5	839.6	857-867	
Ending Stocks, Aug. 31.....	29.7	35.6	100-110	
Acreage and Yield	Million Acres			
Acreage planted.....	31.6	35.2	37.4	40.6 ⁽³⁾
Acreage harvested for beans.....	30.8	34.4	36.6	
Percent harvested (%).....	97.5	97.7	97.9	
Yield per acre harvested.....	22.8	24.5	25.4	
Price	Dollars			
Price per bushel				
Support.....	2.25	2.25	2.50	2.50
Received by farmers (wgt. avg.).....	2.62	2.54	2.77	
No. 1, Yellow Chicago (simple avg.).....	2.88	2.98	2.95	

(1) Preliminary

(2) Forecast

(3) March 1 planting intentions.

Source: USDA.

In 1965, 124 oilseed mills crushed soybeans in the United States. The number had been 193 mills in 1951 and 121 mills in 1959. In 1965 the estimated total processing capacity of these 124 mills amounted to about 600 million bushels. Nearly 538 million bushels were crushed in 1965/66, utilizing about 90% of the capacity, i.e. somewhat more intensively than in most years. The average processing capacity per mill has increased from 1.6 million bushels (48,000 tons) annually in 1951 to 4.8 million bushels (144,000 tons) in 1965.

Soybean crushings during September to May 1966/67, totalled 413 million bushels, about three million bushels more than the year before. The relatively high price of soybeans, compared with product values, has reduced processing margins (the nine-month average of spot prices was 16 cents per bushel, compared with the relatively wide margin of 30 cents a year earlier) and thereby restrained the crush. The industry has operated at about 80% of its estimated crushing capacity.

The soybean crushing rate during June to August is expected to pick up from a year earlier levels, as total requirements for soybean oil and meal increase and supplies of competitive fats and oils and oilseed meals are seasonally reduced. Accordingly, USDA expects crushing for the entire 1966/67 marketing year to total around 550 million bushels, compared with 538 million bushels in 1965/66. The average processing capacity per mill has increased from 1.6 million bushels (48,000 tons) annually in 1951 to 4.8 million bushels (144,000) tons in 1965.

Comparison of Soybean Prices With Market Value of Soybean Oil and Meal

A statistical comparison of this kind does not reflect actual operating margins, since the prices are simple averages, without taking into account location differentials, actual purchases and sales of soybeans, soybean oil or meal, lecithin production, etc. However, a long-term favorable relationship between raw material costs and product prices is essential to the success of the crushing industry.

	Unit of Value	May 1967(1)	April 1967	March 1967	May 1966
Soybean Oil:					
Average price at crushing plant.....	Cents per pound	10.2	10.3	10.3	11.3
Value from bushel of soybeans(2)...	Dollars	1.09	1.10	1.10	1.21
Soybean Meal (44%):					
Bulk price at Decatur	Dollars per ton	73.40	74.50	76.60	80.30
Value from bushel of soybeans(2)...	Dollars	1.74	1.77	1.82	1.90
Value of oil and meal from bushel of soybeans(2)	Dollars	2.83	2.87	2.92	3.11
Marketing price of No. 1 yellow soybeans at Illinois points	Dollars per bushel	2.79	2.80	2.82	3.03
Spread between soybean price and value of oil and meal	Cents	4	7	10	8

(1) Preliminary

(2) Based on assumption that a bushel of soybeans yields 10.7 pounds of oil and 47.5 pounds of meal for crop year 1965/66.

Source: Merrill, Lynch, etc. and USDA.

These statistical data do show the price trends which have characterized developments in the soybean industry in the United States during the past year. Soybean prices have dropped less than product prices. American farmers have tended to hold soybeans or to place them under government support. Through May 31, 1967, about 150 million bushels on the 1966 crop were under price support loans compared with 87 million a year ago. Repayments left a net loan entry of 94 million bushels at the end of May. USDA has announced a loan extension program (reseal), which could keep these soybeans off the market during the 1967/68 crop year.

Increased competition from relatively lower-priced fish meals, mainly from Peru and Norway, and Russian sunflowerseed oil, priced below soybean oil, reduced export demand for soybeans and meal.

Domestic use of soybean meal in the United States was not significantly different from last year. The main factors boosting domestic use this year are the sharp reduction in cottonseed meal supplies, and the increases in poultry, hogs and cattle on feed. Factors restraining oilseed meal usage this year have been the less favorable livestock feed price ratios, and imports of competitive fish meals, which totalled 313,000 tons (mainly from Peru and Chile) during October-April 1966/67 compared with 137,000 tons the previous year.

While at the present time the demand for soybean protein in animal nutrition continues to be the driving force behind the expansion of the soybean industry, the development of synthetic and fermentation products (amino acids, urea, etc.), challenges the structure of all industrial sectors. A recent report of Merrill, Lynch, Pierce, Fenner and Smith, Inc. summarizes the situation.

"Our earlier report that the Japanese would reduce their import levies on soybeans by 50% has been confirmed by their finance ministry. The Japanese Diet is due to act on the measure in December. If approved, it would become effective in April 1968. As we understand the terms, the 50% reduction would take effect gradually over a 5-year period, and should increase the strength of the soybean's competitive position with respect to the other oilseeds. Soybean export inspections were 2.8 million bushels, bringing the total inspections for export since September 1st to 212.7 million bushels compared with 216.3 million a year earlier."

Soybean Oil

USDA estimates that soybean oil production in the United States will be close to 5.9 billion pounds in 1966/67, slightly higher than the 5.8 billion pounds produced in 1965/66. Total domestic use in 1966/67 is placed at about 4.7 billion pounds, about the same as the preceding year. Exports are expected to rise from 947 million pounds in 1965/66 to 1.2 billion pounds in 1966/67. This would leave a carryover of 0.4 billion pounds on October 1, 1967 compared with 0.5 billion pounds at the same date in 1966.

Exports will be composed largely of P.L. 480 shipments. Dollar exports dropped sharply this marketing year because of competition from Russia and East European sunflowerseed oil. Soybean oil exports for the five-month period October 1966 through February 1967 totaled 335 million pounds as compared with 397 million pounds the year before. Dollar exports accounted for 80 million pounds of this, and 255 million pounds, or more than 75% of the total were P.L. 480 shipments.

Soybean Oil: Supply and Disposition

(Year beginning October)

(Million pounds)

	1963	1964	1965	1966
Supply				
Stocks, Oct. 1	920	578	297	462
Production	<u>4,822</u>	<u>5,146</u>	<u>5,800</u>	<u>5,850⁽¹⁾</u>
Total Supply	5,742	5,724	6,097	6,312 ⁽¹⁾
Disposition				
Domestic Disappearance	4,058	4,069	4,688	4,750 ⁽¹⁾
Exports & shipments	<u>1,106</u>	<u>1,357</u>	<u>947</u>	<u>1,200⁽¹⁾</u>
Total Disposition	5,164	5,426	5,635	5,950 ⁽¹⁾
Stocks, Sept. 30	578	297	462	362 ⁽¹⁾

(1) Estimate

Soybean oil prices (crude, Decatur) have continued their downward drift throughout the first half of 1967. From a June-September 1966 level of 12.5 cents per pound, prices dropped to an October-May average of 10.5 cents and reached about 9.15 cents early in July. Soybean oil dropped to more than 2.5 cents per pound below cottonseed oil.

With the prospect of another large crop and continued pressure from sunflowerseed and rapeseed oil in markets outside the United States, a major rise in soybean oil prices cannot be expected.

Utilization of Soybean Oil in Various Products

(Year beginning October)

(Million pounds)

Year	Food				Non-Food				Total Domestic Disappearance		
	Short- ening	Mar- garine	Cooking & Salad oils	Other Edible	Paint & Varnish	Resins & Plastics	Other Inedible (1)	Foots & Losses	Total		
1961	1,353	1,036	771	20	3,180	88	74	47	151	359	3,540
1962	1,222	1,069	933	15	3,239	90	78	54	163	385	3,624
1963	1,391	1,126	1,146	21	3,684	97	84	48	146	374	4,058
1964	1,404	1,107	1,105	32	3,648	94	95	66	165	420	4,069
1965	1,739	1,241	1,203	38	4,221	100	101	60	200	467	4,688

(1) Includes between four and six million pounds of oil used for other drying oil products than those listed.

Source: USDA.

The trend during the present crop year 1966-67 indicated a lower usage of soybean oil in shortenings and a replacement by lower-priced lard, inedible tallow and imported palm oils. However, general soybean oil usage is being boosted by a) the lower oil price, b) the cutback in cottonseed oil production, and c) the increases in population and consumer incomes.

During the crop year 1965/66, soybean oil accounted for 77% of all oil used in the manufacture of margarine, for 55.5% of all oils used in shortening manufacture, and for 44% of all oils in salad and cooking oils.

SOYBEAN MEAL

United States Soybean Meal: Supply and Disposition

(Year beginning October)
(Thousand short tons)

Item	1962	1963	1964	1965	1966(1)
Supply:					
Stocks, Oct. 1.....	94	155	122	106	132
Production.....	11,127	10,609	11,286	12,901	13,100
Total Supply.....	11,221	10,768	11,408	13,007	13,132
Disposition:					
Exports and Shipments	1,476	1,478	2,059	2,656	2,550
Feed.....	9,586	9,168	9,243	10,219	10,500
Ending stocks.....	159	122	106	132	
Total Disposition.....	11,221	10,768	11,408	13,007	—
	Dollars	Dollars	Dollars	Dollars	Dollars
Price per ton Bulk Decatur.....	71.30	71.00	70.20	81.50	—

(1) Estimate.

Source: USDA

Soybean meal production, domestic use and exports during the crop year 1966/67 are not expected to differ substantially from the situation in 1965/66. Fluctuation in livestock population and prices had given rise to expectations for both increases and decreases in demand.

Soybean meal prices in the first half of the crop year 1966/67 were considerably higher than those in 1965/66. The average difference ranged about \$6 per ton. During the second half of the crop year, prices have been tending to be considerably lower than the year before. Soybean meal prices (44% protein, bulk, Decatur) declined from \$82 per ton in October 1966 to \$73 in May 1967.

In 1965, 13.3 million tons of all types of oilseed meals were consumed by the different animal classes, and soybean meal accounted for 10.2 million tons (77%) and cottonseed meal for 2.5 million tons (19%). The different animal classes shared the soybean meal consumption as follows:

Dairy cattle	: 15.0%
Beef Cattle	: 16.4%
Hogs	: 12.7%
Other livestock	: <u>6.5%</u>
Total livestock	: 50.6%
Broilers	: 24.7%
Hens and pullets:	13.7%
Other poultry	: <u>11.0%</u>
Total poultry	: 49.4%

THE FUNCTION OF PUBLIC LAW 480 AND THE UNITED STATES SOYBEAN INDUSTRY

by
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Representatives of the United States soybean industry, soybean growers, and government officials are agreed that Public Law 480—; “The Food-for-Peace Program” — is good for them, good for the country and good for other countries throughout the world as well. Canada is considered by the United States to be among the beneficiaries.

PL 480 is an instrument for moving oil, the soybean industry's problem product, into new markets, through concessional sales, donations, and barter. The residual benefits of a steady and generous flow of 480 oil are many and various, in the United States view.

“Without 480, this oil would be going onto commercial world markets and depressing prices,” says George L. Prichard, Washington representative of the National Soybean Processors Association. “The result of moving oil into human consumption where it is sorely needed, and the people otherwise could not have it, has been to improve the oil market in other producing and processing countries.

“This is no small factor, for example, in the expansion of rapeseed markets for Canada,” Prichard goes on.

“Since the demand for fats and oils in the developed countries is inelastic, the movement of oil to people in the underdeveloped areas under 480 has been an important factor in meeting the expanding demand for soybean protein feeds both in the United States and abroad.

“Any increase in world utilisation of fats and oils,” Prichard says, “is a help to all concerned.”

The great virtue of Public Law 480 is the stimulus it gives to economic development of the receiving country, and, in turn, to commercial trade with the United States, and other countries, in the view of officials in the U.S. Department of Agriculture. They point out that Spain, Greece, Iran, Morocco, Pakistan, and Turkey are among the countries whose first imports of vegetable oil were through 480.

These countries, the officials add, are now buying at least some of their oil on the commercial market. Their dollar purchases of other United States farm products have increased substantially in recent years and they are active in world trade. In an analysis and assessment of the economic effects of 480 in Turkey, Professor Resat Aktan of the University of Ankara, director of the project, reported:

“Since 1955 the PL 480 program has supplied the great bulk of imported edible oils and has supplemented domestic production in order that the strong and expanding domestic demand for these products may be met... In part these supplies replace domestic animal fats, but the great bulk made possible the rapid expansion of margarine production and thus increased total consumption of vegetable oils. Here PL 480 operations directly contributed to a higher standard of living, changed the consumption pattern and indirectly freed foreign exchange for other commercial imports.”

United States dollar sales of oils to Iran reached a total of 119 million pounds in 1964-65. Since then, Iran has continued to be a large buyer in the world market. Spain has become an important dollar

market for United States soybeans and soybean meal -- the result of initial shipments several years ago of soybean oil under the 480 program.

In answer to charges that the United States has "dumped" oil, trade and government officials ask the critics to consider the alternative.

"If the oil were not sold for foreign currencies under 480, and we let it go for what it brought," says Glenn Pogeler, president of the American Soybean Council, "this would disrupt present world markets, in our opinion, and hurt other oilseeds much more than soybeans which have a considerably lower oil content of only 20 % in comparison with about 35% of rapeseed, 45%-to-50% for sunflower of improved varieties, 50 %-to-60 % for shelled peanuts, and 65 % for copra."

United States officials believe that PL 480 has been an important factor in the emergence in recent years of North America -- the United States and Canada -- as the "breadbasket" of much of the rest of the world. "The expansion of world trade since 1960 has surpassed all expectations," observes Frank D. Barlow, Jr., a highly regarded economist in the U.S. Department of Agriculture.

"Soybeans and soybean products, of course, have had the most spectacular relative increase," Mr. Barlow continues. "Prewar trade was small and was largely accounted for by exports from China. Today, world net trade of soybeans is nearly 7 million tons, soybean oil is about 600,000 tons, and soybean meal about 2.5 million tons... United States exports of soybeans and soybean products, which were not even on the board prior to World War II, now account for 87% of world exports."

Prior to World War II, Mr Barlow points out, Latin America ranked first as a net exporter of farm products, followed by Eastern Europe, North America, Oceania, Asia, and Africa, in that order. "By 1966, North America was by far the major net exporting region of the world, accounting for some 85 % of the total."

Mr. Barlow believes that the immediate future growth in world agricultural trade will depend largely upon the United States and Canada, along with Australia, Argentina, South Africa, and other traditional exporting countries to meet the world's increasing demands for food and fiber.

The large increase in soybean imports, he notes, has been concentrated in the commercial markets of Western Europe and Canada where they have more than doubled since World War II. "Price movements of soybeans, meal, and oil have shown less stability since 1955 than those for other commodities -- wheat, rice, and the feed grains. The general price declines in 1958-60 were followed by rising prices in 1961, which continue to show the growing strength of the foreign demand for meal over oil. As new highs are being reached in meal prices, oil prices have failed to reach mid-1950 levels."

But Mr Barlow feels that price is less important to trade expansion than is sometimes supposed. "In the case of soybeans, the growth in export volume has continued even though prices have been rising since 1960," he says. "Demand and other factors often have had more important effects on the volume of trade for most commodities than the level of price per se."

Assistance in developing the economies of other countries through such programs as 480 is a key to growth in future trade, Mr. Barlow thinks. "A recent study conducted by the USDA has shown that by helping to promote economic development, the Food-for-Peace Program also helped develop commercial markets for United States farm products."

Among countries that have been assisted, he points out, were Spain, Israel, Greece, and Taiwan. Commercial sales of United States farm products to these four nations increased from an average of \$21 million during the 1955-60 period to an average of \$180 million in 1963-65.

In the last 12 years, since PL 480 has been in effect, total United States farm exports have more than doubled, rising from \$3.1 billion in fiscal year 1965 to an estimated \$7 billion in 1967.

“What is not adequately recognized is that much of the recent export expansion has been for dollars,” Mr. Barlow stresses. “After an increase in concessional export programs in the late 1950’s, exports under PL 480 levelled off and since 1960 have averaged about \$1.6 billion annually.”

In the case of soybeans, and also wheat, rice and feed grains, says Mr. Barlow, the prospects for commercial demand are “about as strong as at any time we remember in the recent past.”

Most other United States officials, farm leaders, and industry leaders would agree with that forecast.

SOYBEAN PRICES COMPARED WITH MARKET VALUE OF SOYBEAN OIL AND MEAL IN THE UNITED STATES

The following table is based on the USDA Weekly Grain Market News and for statistical comparison only. It does not reflect actual operating margins since prices are simple averages and do not take into account location differentials or actual purchases and sales of soybeans, soybean oil or soybean meal.

A comparison with the Canadian market is possible to a limited extent, since the prices of soybeans and of soybean meal are closely related to the American prices in view of their duty free import. Canadian soybean oil prices are further influenced by a 20 % import duty protection.

	Unit of Value	July 1967	June 1967	May 1967	July 1966
Soybean Oil:					
Average price at crushing plant.....	Cents per lb.	9.1	10.1	10.2	12.4
Value from bushel of soybeans (1).....	Dollars	0.97	1.08	1.09	1.33
Soybean Meal:					
Bulk price at Decatur	Dollars per ton	78.20	78.10	73.70	97.20
Value from bushel of soybeans (1)	Dollars	1.86	1.85	1.75	2.30
Value of oil and meal from bushel of soybeans.....	Dollars	2.83	2.93	2.84	3.63
Market price of No. 1 yellow soybeans at Illinois points	Dollars per bu.	2.74	2.82	2.79	3.49
Spread between soybean price and value of oil and meal	Cents	9	11	5	14

(1) Based on assumption that a bushel of soybeans yields 10.7 pounds of oil and 47.5 pounds of meal.

CONVERSION FACTORS

Oilseeds: Statutory Weight per Bushel and Average Volume per Short Ton

	Pounds	Cubic Feet
Flaxseed	56	45.9
Soybeans	60	42.8
Rapeseed	50	51.4
Sunflowerseed	30	85.7
Mustard Seed	—	51.4

Oilseed Products

	Extraction Rate (Percent)	Yield per Bushel (Pounds)	Weight of Gallon (Pounds)
Flaxseed, Crude Oil	35.4	19.8	9.3
Linseed Meal	61.7	34.6	—
Soybeans, Crude Oil	17.7	10.6	9.2
Meal	80.0	47.3	—
Rapeseed, Oil	37.5	18.75	9.1
Meal	57.5	28.75	—
Sunflowerseed, Oil(1)	36.0	10.8	9.2
Meal (1)	38.0	11.4	—
Mustard Seed, Oil	19.0	—	—
Meal	70.0	—	—

(1) Starting in 1966, DBS has been listing sunflowerseed crushings separately. The development of varieties with lower hull and higher oil content has increased the yield of meal and oil. The new conversion factors are for the time being in better agreement with actual results.

Other Products

Marine Oils: 1 Imperial gallon = 9.25 lbs.

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