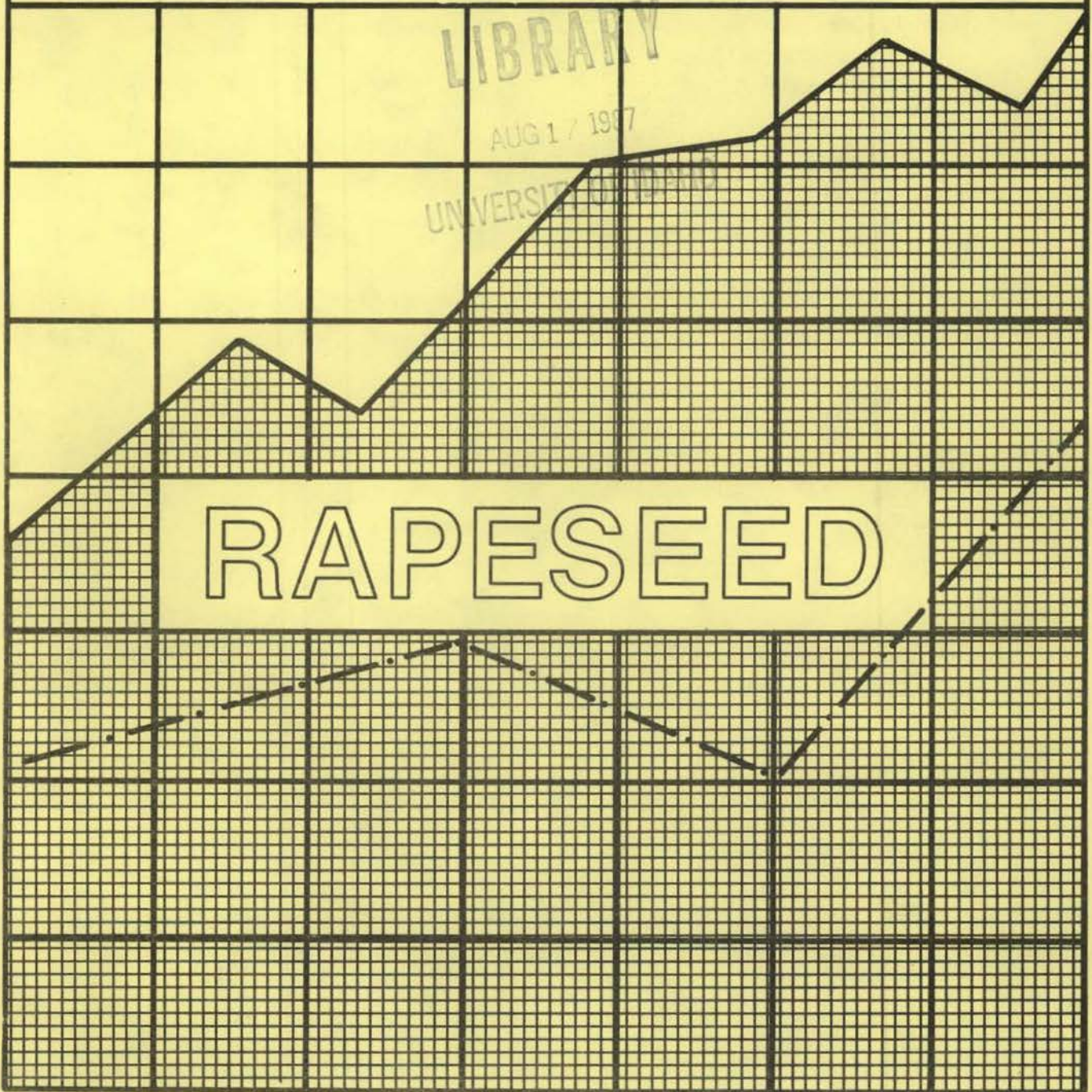


An International Market Profile:



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An International Market Profile: **Rapeseed**

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Introduction

Rapeseed has been grown in the Pacific Northwest (PNW) on small acreages since the turn of the century. Currently, it is being investigated as a major alternate crop to wheat, peas, lentils and barley, the traditional crops of the region. Considerable effort has been expended to develop new rapeseed varieties adapted to the PNW and suitable to a variety of uses. The purpose of this publication is to present a market profile of the international market for rapeseed and the products produced from this oilseed.

Rapeseed is mainly used as edible and industrial oils. The type of oil marketed (edible or industrial) depends upon the level of erucic acid in the oil produced from the seed. Oil with low levels of erucic acid is considered safe for human use in such food products as margarine, shortening, cooking oil and salad oil. (As of January 1985, the U.S. Food and Drug Administration is considering rapeseed oil to be safe for food use if the erucic acid level is 2 percent or less.) Oil with higher levels of erucic acid is considered unsafe for human consumption and is used only for industrial purposes such as lubricants, varnishes, rubber additives and plasticizers.

Rapeseed meal, a by-product remaining after oil extraction, is used as a protein supplement in animal rations and as fertilizer. The specific use of the meal depends upon the level of glucosinolate in the meal. High levels of glucosinolate render the meal unacceptable for use in animal rations as it releases goitrogenic compounds, influences odor and palatability of the ration and adversely affects animal performance.

A market profile for rapeseed must take into consideration that it is marketed as rapeseed, rapeseed oil and rapeseed meal. Thus, the analysis that follows will include the three forms in which rapeseed enters the international market. This profile will be divided into three

sections designed to provide insight into the following three questions:

1. What is the relative position of rapeseed in the world oilseed market?
2. What is the world production and market situation for rapeseed, rapeseed oil and rapeseed meal?
3. What is the market potential for U.S. exports of rapeseed?

World Oilseed Situation

Since rapeseed is an oilseed that competes with certain other oilseeds, evaluation must consider its position relative to other oilseeds in the world and any changes in this position over time, including production, exports, crush and stocks. Tables 1, 2 and 3 present the data upon which this evaluation is based.

Oilseed — Table 1

1. The major oilseed commodities, in order of importance in the world, are soybean, cottonseed, peanut, sunflowerseed and rapeseed.
2. The dominant commodity is soybean.
 - a. In 1981-82, soybean accounted for:
 - 50.8 percent of world oilseed production
 - 81.4 percent of world oilseed exports
 - 52.3 percent of world oilseed crush
 - 78.5 percent of world oilseed carryover
 - b. In 1985-86, soybean is estimated to account for:
 - 49.9 percent of world oilseed production (same)
 - 77.2 percent of world oilseed exports (decline of 4.2 percent)
 - 50.3 percent of world oilseed crush (decline of 2 percent)
 - 86.5 percent of world oilseed carryover (increase of 8 percent)

3. Rapeseed ranks fifth in importance.

a. In 1981-82, rapeseed accounted for:

- 7.3 percent of world oilseed production
- 6.0 percent of world oilseed exports
- 8.7 percent of world oilseed crush
- 4.8 percent of world oilseed carryover

b. In 1985-86, rapeseed is estimated to account for:

- 9.2 percent of world oilseed production (increase of 1.9 percent)
- 8.8 percent of world oilseed exports (increase of 2.8 percent)
- 10.7 percent of world oilseed crush (increase of 2.0 percent)
- 3.2 percent of world oilseed carryover (decline of 1.6 percent)

Table 1. Major oilseeds: world supply and utilization (million metric tons).

	1981-82	1982-83	1983-84	1984-85 Prelim	1985-86 September	1985-86 October
Production						
Soybean	86.12	93.56	82.56	90.88	97.11	97.82
Cottonseed	27.49	26.65	26.18	33.10	30.70	31.30
Peanut	19.90	17.49	18.63	19.66	21.30	20.50
Sunflowerseed	14.80	16.57	15.42	17.63	18.07	13.56
Rapeseed	12.37	14.77	14.24	16.77	18.08	18.10
Flaxseed	2.09	2.50	2.13	2.21	2.65	2.65
Copra	4.78	4.57	3.78	4.66	4.61	4.94
Palm kernel	1.89	1.80	2.08	2.21	2.33	2.33
Total	169.43	177.90	165.04	187.12	194.86	196.21
Exports						
Soybean	29.32	28.57	26.13	24.97	25.69	25.57
Cottonseed	0.23	0.21	0.25	0.31	0.31	0.32
Peanut	1.10	0.99	0.92	0.95	0.94	0.96
Sunflowerseed	2.11	1.93	1.94	2.19	2.22	2.23
Rapeseed	2.14	2.39	2.53	3.13	2.98	2.93
Flaxseed	0.48	0.51	0.68	0.53	0.63	0.63
Copra	0.47	0.27	0.28	0.30	0.31	0.31
Palm kernel	0.15	0.14	0.18	0.15	0.16	0.16
Total	36.01	35.00	32.91	32.53	33.25	33.11
Imports						
Soybean	29.20	28.25	25.11	25.13	25.51	25.33
Cottonseed	0.13	0.11	0.19	0.27	0.29	0.30
Peanut	1.08	1.00	0.95	0.91	0.93	0.93
Sunflowerseed	2.29	1.85	1.81	2.13	2.18	2.22
Rapeseed	2.22	2.53	2.69	3.16	2.85	2.80
Flaxseed	0.49	0.49	0.61	0.53	0.65	0.63
Copra	0.46	0.23	0.25	0.27	0.27	0.27
Palm kernel	0.12	0.14	0.11	0.14	0.15	0.15
Total	35.99	34.80	31.74	32.54	32.84	32.64
Crush						
Soybean	72.70	76.20	70.63	72.77	74.73	74.64
Cottonseed	21.73	21.37	21.17	26.11	24.22	24.68
Peanut	11.24	9.74	10.34	10.73	11.83	11.31
Sunflowerseed	12.61	14.20	13.53	15.17	15.63	15.95
Rapeseed	11.98	13.80	13.31	15.42	16.40	16.32
Flaxseed	1.92	1.93	2.11	1.80	2.16	2.16
Copra	4.71	4.39	3.67	4.48	4.45	4.74
Palm kernel	1.64	1.73	1.89	2.05	2.19	2.19
Total	138.04	143.35	136.66	148.53	151.61	152.00
Ending Stocks						
Soybean	14.91	17.20	13.37	16.78	23.94	24.55
Cottonseed	0.78	0.39	0.18	0.50	0.82	0.82
Peanut	0.77	0.57	0.60	0.85	0.85	0.85
Sunflowerseed	0.77	0.70	0.29	0.48	0.50	0.66
Rapeseed	0.91	0.79	0.66	0.70	0.81	0.92
Flaxseed	0.45	0.67	0.31	0.31	0.40	0.40
Copra	0.26	0.13	0.08	0.10	0.08	0.11
Palm kernel	0.15	0.08	0.09	0.10	0.09	0.09
Total	19.00	20.53	15.59	19.82	27.49	28.38

NOTE: Totals may not add due to rounding.

Source: Counselor and Attache Reports, Foreign Agricultural Service, Official Statistics, USDA Estimates, Oilseeds and Products, October 1985.

Oilseed — Table 2

This table presents the volume and percent changes in the production, export, carryover and crush of the major oilseeds between 1981-82 and estimated 1985-86.

1. Production changes:

- 26.8 million M/T more oilseeds are estimated to be produced in 1985-86 than in 1981-82 (15.8 percent increase).
- Production increases are estimated for all oilseeds except sunflowerseed. That is estimated to decline by 1.2 million M/T (8.4 percent decrease).
- Major increases are estimated to occur in soybean (11.7 million M/T, 13.6 percent increase), rapeseed (5.7 million M/T, 46.3 percent increase) and cottonseed (3.8 million M/T, 13.9 percent increase).

2. Export changes:

Table 2. Major oilseeds: Change in production, exports, ending stocks and crush, 1981-82 through 1985-86.

	Volume (million M/T)	Change (%)
Production		
Soybean	+ 11.7	+ 13.6
Cottonseed	+ 3.8	+ 13.9
Peanut	+ .6	+ 3.0
Sunflowerseed	- 1.2	- 8.4
Rapeseed	+ 5.7	+ 46.3
Flaxseed	+ .6	+ 26.8
Copra	+ .2	+ 3.3
Palm kernel	+ .4	+ 23.3
Total	+ 26.8	+ 15.8
Exports		
Soybean	- 3.8	- 12.8
Cottonseed	+ .1	+ 39.1
Peanut	- .1	- 12.8
Sunflowerseed	+ .1	+ 5.7
Rapeseed	+ .8	+ 36.9
Flaxseed	+ .2	+ 31.3
Copra	- .2	- 34.1
Palm kernel	+ .1	+ 6.7
Total	- 2.9	- 8.1
Ending stocks		
Soybean	+ 9.6	+ 64.7
Cottonseed	+ .04	+ 5.1
Peanut	+ .1	+ 10.4
Sunflowerseed	- .1	- 14.3
Rapeseed	+ .01	+ 1.1
Flaxseed	- .05	- 11.1
Copra	- .2	- 57.7
Palm kernel	- .06	- 40.0
Total	+ 9.38	+ 49.4
Crush		
Soybean	+ 2.4	+ 3.4
Cottonseed	+ 3.0	+ 13.6
Peanut	+ 0.1	+ 0.6
Sunflowerseed	+ 3.3	+ 26.5
Rapeseed	+ 4.3	+ 36.2
Flaxseed	+ 0.2	+ 12.5
Copra	+ 0.03	+ 0.6
Palm kernel	+ 0.6	+ 33.5
Total	+ 14.0	+ 10.1

Source: Table 1.

- Total exports of oilseeds are estimated to be 2.9 million M/T, or 8.1 percent, less in 1985-86 than in 1981-82. This is almost entirely a result of a decline in soybean exports of 3.8 million M/T (12.8 percent).

- Rapeseed exports are estimated to increase by 800,000 M/T or 36.9 percent.

3. Ending stock (carryover) changes:

- Total carryover of all oilseeds is estimated to increase by 9.38 million M/T or 49.4 percent between 1981-82 and 1985-86. This increase is almost entirely a result of the increase in soybean carryover of 9.6 million M/T (64.7 percent).

- Rapeseed carryover also increased but by only 10,000 M/T or 1.1 percent.

- The carryover of sunflowerseed, flaxseed, copra and palm kernel actually declined over the 5-year period even though production of all except sunflowerseed increased during the period.

4. Crush changes:

- Total oilseed crush of all oilseeds is estimated to increase by 14 million M/T or 10.1 percent over the period. This rate of increase is about the same as the rate of increase in world population over the period.

- The most significant increase in crush occurred for rapeseed, an increase of 4.3 million M/T or 36.2 percent.

Oilseed — Table 3

This table presents information regarding the portion of the production of the various major oilseeds that was crushed in 1981-82 and 1985-86.

- Overall, 81.5 percent of total oilseed production was crushed in 1981-82 and this percentage declined to 77.5 percent in 1985-86. This difference is primarily accounted for by the increase in carryover.
- As a percent of total production, the crush of cottonseed, peanut, sunflowerseed and copra remained essentially the same. The crush percentage of palm kernel increased, while it declined for soybean, rapeseed and flaxseed.

Table 3. Percent of oilseed production that is crushed, 1981-82 and 1985-86.

	1981-82 (%)	1985-86 (%)
Soybean	83.8	76.7
Cottonseed	79.0	78.8
Peanut	56.5	55.2
Sunflowerseed	85.2	85.9
Rapeseed	96.8	90.2
Flaxseed	91.9	81.5
Copra	98.5	96.0
Palm kernel	86.8	94.0
Total	81.5	77.5

Source: Table 1.

Conclusions Relating to the World Oilseed Situation

1. The world situation with respect to oilseeds appears to have the following characteristics:
 - a. World crush is increasing at about the same rate as world population.
 - b. World production is increasing at a somewhat faster rate than crush, resulting in a general increase in annual carryover.
 - c. World exports have leveled out and perhaps are even declining. When increased production is considered, this indicates that an increased effort is being exerted to achieve self sufficiency in many countries.
2. The world oilseed is dominated by soybeans. Soybeans account for about one-half of the world oilseed production and crush, over three-fourths of the world exports and around four-fifths of the world oilseed carryover. These portions have remained relatively the same over the past 5 years except that soybeans are accounting for a larger portion of the total oilseed carryover.
3. The rapeseed share of world oilseed production, exports and crush is increasing slowly. In 1985-86 this share had increased by about 2 percent over 1981-82 while the rapeseed share of oilseed carryover accounted for has declined. This would indicate a cautiously optimistic future for rapeseed in the world oilseed situation.

World Rapeseed Situation

The next step of evaluating the potential international market for rapeseed involves an analysis of worldwide production and marketing of this commodity. The objective of this analysis is to determine:

1. Who are the major producers of rapeseed;
2. Who are the major exporters of rapeseed (who are our competitors); and
3. Who are the major importers of rapeseed (who are our potential markets).

The analysis that follows is divided into three sections: rapeseed, rapeseed oil and rapeseed meal.

Rapeseed

Table 4 presents the rapeseed supply and utilization data for the years 1979-80 through 1985-86. Tables 5, 6, 7 and 8 are developed from Table 4.

Rapeseed — Table 5

1. During the 6-year period, rapeseed production increased by 80 percent, or slightly over 13 percent per year.
2. In 1985-86, three countries accounted for 65 percent of total production — China (30.3 percent), India (16.5 percent) and Canada (18.1 percent).

3. The production in China and India increased significantly over the period — China (129 percent) and India (110 percent) — while Canada's production in 1985-86 was 3 percent below the 1979-80 production.
4. About 57 percent of the increase in production between 1979-80 and 1985-86 was from China and India.

Rapeseed — Table 6

1. During the 6-year period, exports increased by 42 percent (average of 7 percent annually).
2. Canada is the major exporter, accounting for 83 percent in 1979-80 but only 48.7 percent in 1985-86. This amounted to an absolute decline in volume exports from Canada of 17 percent between 1979-80 and 1985-86.
3. France increased its exports by 2,726 percent in this period and now accounts for almost 22 percent of all exports (up from 1 percent in 1979-80).

Rapeseed — Table 7

1. Total imports of rapeseed increased by 20 percent during the 6-year period (average of about 3 percent annually).
2. Japan is the major importer, accounting for 46.1 percent in 1985-86, growing from 43.8 percent in 1979-80. In total, imports by Japan grew at an annual average rate of slightly over 4 percent.
3. The Federal Republic of Germany is the second largest importer (25.5 percent of total imports), followed by Belgium (10.6 percent) and The Netherlands (9.7 percent).
4. The four countries of Japan, West Germany, Belgium and The Netherlands accounted for about 92 percent of all imports of rapeseed.

Rapeseed — Table 8

1. Total crush of rapeseed increased by 88 percent over the 6-year period (average of almost 15 percent annually).
2. China crushes the largest portion of total crush — 30 percent in 1985-86. This increased from 24.7 percent in 1979-80.
3. India is the second largest crusher (16.6 percent), followed by the Federal Republic of Germany, Japan and Canada, all with about 8 percent of the world total.
4. All countries crushing rapeseed increased the crush during the 6-year period.

Rapeseed — Conclusions

1. Over 90 percent of the rapeseed production is crushed.
2. Rapeseed production has been increasing at an annual average rate of 13 percent, while the crush has been increasing at 15 percent. Thus, rapeseed carryover has actually declined over the 6-year period.

Table 4. Rapeseed supply and utilization, 1980-81 through 1985-86 (in 1,000 metric tons).

	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85 Prelim	1985-86 Forecast
Production							
China	2,402	2,384	4,065	5,656	4,287	4,205	5,500
India	1,428	2,002	2,382	2,207	2,566	2,900	3,000
Canada	3,411	2,484	1,849	2,225	2,632	3,150	3,300
France	510	1,103	990	1,147	906	1,302	1,337
Fed. Rep. of Germany	321	377	363	535	599	662	710
United Kingdom	198	300	325	580	580	930	950
Poland	233	572	496	433	555	955	1,081
Dem. Rep. of Germany	201	277	307	280	261	280	251
Sweden	264	285	282	320	318	328	332
Czechoslovakia	80	214	200	178	314	300	265
Denmark	150	225	290	335	309	517	370
Pakistan	247	252	238	246	217	210	230
Yugoslavia	93	68	65	79	103	123	120
Bangladesh	118	122	123	120	131	140	140
Finland	51	88	69	96	101	83	95
Hungary	41	98	75	85	91	98	100
USSR	8	14	29	47	69	55	95
Other	324	239	220	204	219	274	306
Total	10,080	11,104	12,368	14,773	14,258	16,512	18,182
Exports							
Canada	1,743	1,372	1,359	1,271	1,497	1,350	1,450
France	23	478	376	620	433	600	650
Denmark	133	184	265	272	263	448	251
Sweden	88	143	80	101	83	103	92
Fed. Rep. of Germany	26	47	11	53	77	100	100
Other	89	81	51	76	174	437	436
Total	2,102	2,305	2,142	2,393	2,527	3,038	2,979
Imports							
Japan	1,067	1,177	1,212	1,207	1,195	1,470	1,350
Fed. Rep. of Germany	786	623	504	825	662	847	747
Netherlands	87	104	201	230	257	275	285
United Kingdom	137	141	75	29	125	20	20
Algeria	71	69	27	23	15	15	15
Mexico	7	18	24	0	43	60	40
France	98	15	17	36	131	115	90
Belgium	24	63	47	31	189	286	312
India	9	6	0	0	0	0	0
Other	149	150	109	145	76	68	69
Total	2,435	2,366	2,216	2,526	2,693	3,156	2,928
Crush							
China	2,162	2,146	3,659	5,084	3,844	3,762	4,927
India	1,306	1,826	2,165	2,006	2,033	2,936	2,727
Fed. Rep. of Germany	763	948	813	1,322	1,188	1,400	1,352
Japan	1,010	1,192	1,167	1,175	1,252	1,440	1,330
Canada	897	1,003	945	904	1,159	1,250	1,350
United Kingdom	330	419	380	505	565	620	665
France	546	656	645	543	581	830	800
Poland	212	494	422	433	491	800	774
Dem. Rep. of German	184	242	295	258	258	277	254
Czechoslovakia	86	211	176	196	300	285	250
Netherlands	90	110	218	222	277	300	305
Pakistan	235	240	226	233	206	200	218
Sweden	179	162	201	213	227	225	240
Bangladesh	140	140	135	135	140	150	150
Yugoslavia	30	78	57	70	100	110	107
Finland	51	83	72	94	100	88	95
Hungary	45	84	66	70	90	95	95
Algeria	71	69	27	23	15	15	15
USSR	6	13	24	42	64	50	90
Belgium	25	64	45	35	167	275	300
Italy	62	60	18	18	26	35	35
Rep. of Korea	43	54	57	46	10	10	10
Other	269	183	170	172	214	298	362
Total	8,742	10,477	11,983	13,799	13,307	15,451	16,451
Ending Stocks	1,708	1,489	910	793	664	532	821

Source: Counselor and Attache Reports, Foreign Agricultural Service, Official Statistics, USDA Estimates, Oilseeds and Products, August 1985.

Table 5. Rapeseed production, major countries, 1979-80 through 1985-86.

Country	Production				Change in production 1979-80 — 1985-86	
	1979-80		1985-86		Quantity (1,000 M/T)	Percent
	Quantity (1,000 M/T)	Percent of total production	Quantity (1,000 M/T)	Percent of total production		
China	2,402	23.8	5,500	30.3	+3,098	+129
India	1,428	14.2	3,000	16.5	+1,572	+110
Canada	3,411	33.8	3,300	18.1	- 111	- 3
France	510	5.1	1,337	7.3	+ 827	+162
FR Germany	321	3.2	710	3.9	+ 389	+121
UK	198	2.0	950	5.2	+ 752	+380
Poland	233	2.3	1,081	6.0	+ 847	+363
East Germany	201	2.0	251	1.4	+ 50	+ 25
Other	1,376	13.6	2,053	11.3	+ 677	+ 49
Total	10,080	100.0	18,182	100.0	+8,102	+ 80

Source: Table 4.

Table 6. Rapeseed exports, major export countries, 1979-80 through 1985-86.

Country	Exports				Change in exports 1979-80 — 1985-86	
	1979-80		1985-86		Quantity (1,000 M/T)	Percent
	Quantity (1,000 M/T)	Percent of total exports	Quantity (1,000 M/T)	Percent of total exports		
Canada	1,743	83.0	1,450	48.7	- 293	- 17
France	23	1.1	650	21.8	+627	+2,726
Denmark	133	6.3	251	8.4	+118	+ 89
Sweden	88	4.3	92	3.1	+ 4	+ 5
Germany	26	1.1	100	3.4	+ 74	+ 285
Other	89	4.2	436	14.6	+347	+ 390
Total	2,102	100.0	2,979	100.0	+877	+ 42

Source: Table 4.

Table 7. Rapeseed imports, major countries, 1979-80 through 1985-86.

Country	Imports				Change in imports 1979-80 — 1985-86	
	1979-80		1985-86		Quantity (1,000 M/T)	Percent
	Quantity (1,000 M/T)	Percent of total imports	Quantity (1,000 M/T)	Percent of total imports		
Japan	1,067	43.8	1,350	46.1	+283	+ 26
FR Germany	786	32.3	747	25.5	- 39	- 5
Netherlands	87	3.6	285	9.7	+198	+ 228
UK	137	5.6	20	0.7	-117	- 85
Algeria	71	2.9	15	0.5	- 56	- 79
Mexico	7	0.3	40	1.4	+ 33	+ 471
France	98	4.0	90	3.1	- 8	- 8
Belgium	24	1.0	312	10.6	+280	+1,167
India	9	0.4	0	0	- 9	- 100
Other	149	6.1	69	2.4	- 80	- 54
Total	2,435	100.0	2,928	100.0	+493	+ 20

Source: Table 4.

- Rapeseed exports and imports have increased at a rate much slower than production. Thus, increases in production apparently are occurring to facilitate increases in crush within the production country. This is particularly true in China and India, the major production countries of the world.
- The major importer of rapeseed is Japan. The next three major importers are all members of the European Economic Community (E.C.) and the majority of their imports originate from within the E.C. Thus, the market to these countries for the U.S. is extremely limited.
- The major competitor of the U.S. is Canada, followed by France and Denmark.

Rapeseed Oil

Table 9 presents the data on rapeseed oil supply and utilization for the years 1979-80 through 1985-86. Tables 10, 11, 12 and 13 are developed from Table 9.

Rapeseed Oil — Table 10

- Rapeseed oil production has increased at about the same rate as rapeseed crush — 15 percent annually over the 6-year period.
- China is the world's largest producer of rapeseed oil (27.2 percent) followed by India (15 percent) and West Germany, Japan and Canada, all with about 9 percent of the world's production.

Rapeseed Oil — Table 11

- Exports of rapeseed oil have almost doubled during this 6-year period. The total amount of exports, however, is relatively small, about 20 percent of production.
- Major exporters of rapeseed oil include West Germany (26.5 percent), France (20.2 percent) and Canada (19.0 percent).

- The Netherlands and Poland seem to be increasing their production and exports significantly.

Rapeseed Oil — Table 12

- The major importers of rapeseed oil are India (17.8 percent), Algeria (15.2 percent) and U.K. (7.6 percent), followed by Nigeria, The Netherlands, Italy and West Germany, each with around 6 percent of the world total.
- Algeria, U.K. and India have increased their imports significantly over the past 6 years.

Rapeseed Oil — Table 13

- Worldwide consumption of rapeseed oil has increased at a slightly slower rate than production (83 percent vs. 85 percent). This has resulted in a slight increase in carryover (from 159,000 M/T in 1979-80 to 243,000 M/T in 1985-86).
- Major consumers of rapeseed oil are China (27.5 percent), India (18.7 percent) and Japan (9.7 percent).
- The rate of increase of consumption of rapeseed oil in Japan has not been as rapid as other major consuming countries, resulting in a decline from 13.0 percent of the world consumption in 1979-80 to 9.7 percent in 1985-86.

Rapeseed Meal

Table 14 presents data on rapeseed meal supply and utilization for the years 1979-80 through 1985-86. Tables 15, 16, 17 and 18 are developed from Table 14.

Rapeseed Meal — Table 15

- As one would expect, rapeseed meal production has increased at the same rate as the crush.
- Each 100 kg of rapeseed yields about 36 kg of oil and 64 kg of meal when crushed.
- The largest producers of rapeseed meal are, of course, the same as the highest producers of rapeseed oil.

Table 8. Rapeseed crush, major countries, 1979-80 through 1985-86.

Country	Crush				Change in crush 1979-80 — 1985-86	
	1979-80		1985-86		Quantity (1,000 M/T)	Percent
	Quantity (1,000 M/T)	Percent of total crush	Quantity (1,000 M/T)	Percent of total crush		
China	2,162	24.7	4,927	30.0	+2,765	+128
India	1,306	14.9	2,727	16.2	+1,421	+109
FR Germany	763	8.7	1,352	8.2	+ 589	+ 77
Japan	1,010	11.6	1,330	8.1	+ 320	+ 32
Canada	897	10.3	1,350	8.2	+ 453	+ 50
UK	330	3.8	665	4.0	+ 335	+102
France	546	6.3	800	4.9	+ 254	+ 46
Poland	212	2.4	774	4.7	+ 562	+265
Other	1,516	17.3	2,526	15.3	+1,010	+ 67
Total	8,742	100.0	16,451	100.0	+7,709	+ 88

Source: Table 4.

Table 9. Rapeseed oil supply and utilization, 1980-81 through 1985-86 (in 1,000 metric tons).

	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85 Prelim	1985-86 Forecast
Production							
China	713	708	1,207	1,678	1,269	1,241	1,626
India	431	602	714	662	671	969	900
Fed. Rep. of Germany	303	370	336	510	466	545	528
Japan	407	487	476	479	506	579	535
Canada	365	418	382	366	456	500	540
France	218	270	263	213	225	325	313
Poland	87	205	173	177	201	320	317
United Kingdom	145	165	145	180	200	215	235
Dem. Rep. of Germany	82	114	125	113	108	116	106
Czechoslovakia	26	85	70	79	120	114	100
Netherlands	34	46	86	87	110	119	120
Pakistan	77	79	79	81	72	70	76
Sweden	71	65	80	87	91	91	96
Yugoslavia	13	34	23	29	42	46	45
Other	275	285	230	240	336	405	455
Total	3,247	3,933	4,389	4,981	4,873	5,655	5,992
Exports							
Fed. Rep. of Germany	181	235	245	311	287	335	328
Canada	152	198	163	117	177	215	235
France	154	213	190	149	178	265	250
Netherlands	36	49	85	93	101	105	100
Sweden	40	36	44	54	49	51	54
Poland	7	7	4	3	20	50	60
Other	65	76	93	109	144	179	213
Total	635	814	824	836	956	1,200	1,240
Imports							
India	123	124	78	112	259	200	200
Nigeria	87	120	136	60	80	65	65
Algeria	55	96	84	38	85	170	170
United Kingdom	15	18	77	58	80	85	85
Netherlands	32	69	51	81	73	72	70
Fed. Rep. of Germany	39	74	77	72	76	50	60
Italy	71	40	52	51	44	50	70
Other	167	215	215	300	297	400	401
Total	589	756	770	772	994	1,092	1,121
Consumption¹							
China	701	698	1,185	1,653	1,256	1,231	1,616
India	574	716	782	784	890	1,179	1,100
Japan	417	505	492	505	522	565	572
Fed. Rep. of Germany	159	202	180	255	265	260	260
Canada	199	233	225	241	270	275	295
United Kingdom	145	156	217	218	250	270	270
Poland	88	206	183	198	196	247	255
Dem. Rep. of Germany	81	118	125	103	117	114	115
Algeria	80	120	93	46	90	175	175
Nigeria	87	120	136	60	80	65	65
Czechoslovakia	28	87	72	79	120	114	100
Pakistan	75	80	83	88	77	72	76
France	63	66	87	86	69	83	90
Netherlands	29	61	50	73	84	85	85
Italy	70	94	59	58	52	60	80
Bangladesh	62	45	55	56	60	57	57
Yugoslavia	30	30	19	43	47	66	65
Other	315	350	292	355	435	576	601
Total	3,203	3,887	4,335	4,901	4,880	5,494	5,877
Ending Stocks	159	147	147	163	194	247	243

¹Consumption data represent "apparent consumption" and include all disappearance as well as some changes in stocks.

Source: Counselor and Attache Reports, Foreign Agricultural Service, Official Statistics, USDA Estimates, Oilseeds and Products, August 1985.

Table 10. Rapeseed oil production, major countries, 1979-80 through 1985-86.

Country	Production				Change in production 1979-80 — 1985-86	
	1979-80		1985-86		Quantity (1,000 M/T)	Percent
	Quantity (1,000 M/T)	Percent of total production	Quantity (1,000 M/T)	Percent of total production		
China	713	22.0	1,626	27.2	+ 913	+ 128
India	431	13.3	900	15.0	+ 469	+ 109
FR Germany	303	9.3	528	8.8	+ 225	+ 74
Japan	407	12.5	535	8.9	+ 128	+ 31
Canada	365	11.2	540	9.0	+ 175	+ 48
France	218	6.7	313	5.2	+ 95	+ 44
Poland	87	2.7	317	5.3	+ 230	+ 264
UK	145	4.5	235	3.9	+ 90	+ 62
Other	578	17.8	998	16.7	+ 420	+ 13
Total	3,247	100.0	5,992	100.0	+ 2,745	+ 85

Source: Table 9.

Table 11. Rapeseed oil exports, major countries, 1979-80 through 1985-86.

Country	Exports				Change in exports 1979-80 — 1985-86	
	1979-80		1985-86		Quantity (1,000 M/T)	Percent
	Quantity (1,000 M/T)	Percent of total exports	Quantity (1,000 M/T)	Percent of total exports		
FR Germany	181	28.5	328	26.5	+ 148	+ 82
Canada	152	23.9	235	19.0	+ 83	+ 55
France	154	24.2	250	20.2	+ 96	+ 62
Netherlands	36	5.7	100	8.1	+ 64	+ 178
Sweden	40	6.3	54	4.3	+ 14	+ 35
Poland	7	1.1	60	4.7	+ 53	+ 757
Other	65	10.3	213	17.2	+ 148	+ 228
Total	635	100.0	1,240	100.0	+ 605	+ 95

Source: Table 9.

Table 12. Rapeseed imports, major countries, 1979-80 through 1985-86.

Country	Imports				Change in imports 1979-80 — 1985-86	
	1979-80		1985-86		Quantity (1,000 M/T)	Percent
	Quantity (1,000 M/T)	Percent of total imports	Quantity (1,000 M/T)	Percent of total imports		
India	123	20.9	200	17.8	+ 77	+ 63
Nigeria	87	14.8	65	5.8	- 22	- 25
Algeria	55	9.3	170	15.2	+ 115	+ 209
UK	15	2.5	85	7.6	+ 70	+ 467
Netherlands	32	5.4	70	6.2	+ 38	+ 119
FR Germany	39	6.6	60	5.4	+ 21	+ 54
Italy	71	12.1	70	6.2	- 1	- 1
Other	167	28.4	401	35.8	+ 234	+ 140
Total	589	100.0	1,121	100.0	+ 532	+ 90

Source: Table 9.

Rapeseed Meal — Table 16

- Exports of rapeseed meal have almost doubled during the 6-year period, indicating that major oil production countries have surplus rapeseed meal. India, which has to import oil, exports meal.
- Major exporters are Canada (27.6 percent), France (13.4 percent) and The Netherlands (10.9 percent), followed by India and West Germany, each with 7.3 percent of the world exports.

Rapeseed Meal — Table 17

- Major importers of rapeseed meal are The Netherlands (16.2 percent), West Germany (26.2 percent) and Denmark (9.6 percent), followed by U.K., Norway and the U.S., each accounting for 7.5 to 8.5 percent.
- Japan, the seventh largest importer, accounted for 6.2 percent of world imports, up 1,043 percent from 1979-80.

Rapeseed Meal — Table 18

- Consumption of rapeseed meal has increased over the 6-year period at a rate slightly less than production. Thus, carryover has increased during the period from 149,000 M/T to 301,000 M/T.
- Major consumption countries are China (28.1 percent), India (17.4 percent), West Germany (10.5 percent) and Japan (8.7 percent).

Rapeseed Meal — Conclusions

- Rapeseed meal, because it is a by-product from the production of oil, is produced by the countries that produce oil.
- Consumption of meal occurs basically in the country where it is produced, except for Canada, West Germany, France and India which have surpluses of rapeseed meal and must export.

Rapeseed Market Situation in Japan

The analysis in the preceding sections suggests that the major market with potential for U.S. rapeseed exports is Japan. Japan is the major importer of rapeseed and depends almost entirely on imports of rapeseed since it produces only insignificant amounts. Further, available land area will limit expansion of rapeseed production in the country. Because of this situation, this section will be limited to an analysis of Japan as a potential export market for U.S. production.

Table 19 presents the volume and value data for Japanese rapeseed, rapeseed oil and rapeseed meal for 1983 and 1984. Table 20 presents information regarding the percent of imports received from various countries and changes in these imports between 1983 and 1984. The following conclusions are based on analysis of those two tables:

- In 1984, Japan imported a total of 6.3 million M/T of vegetable oilseeds of which 1.3 million M/T (20.4 percent) was rapeseed. Rapeseed volume increased from 17.9 percent in 1983.
- In 1984, Japan imported 97,400 M/T more rapeseed than in 1983. This was an 8 percent increase, and it occurred while total imports of all oilseeds decreased by 5.3 percent.
- Canada is by far the major supplier of rapeseed to Japan (92.4 percent in 1984). Other suppliers include China, France, Sweden and a small amount from the U.S.
- Canada is also the dominant source of Japanese rapeseed oil imports (only crude), at least in 1984 (78.3 percent). Since sources of rapeseed crude oil vary from year to year, price apparently is a major determining factor as to location of supply.

Table 13. Rapeseed oil consumption, major countries, 1979-80 through 1985-86.

Country	Consumption				Change in consumption	
	1979-80		1985-86		1979-80 — 1985-86	
	Quantity (1,000 M/T)	Percent of total consumption	Quantity (1,000 M/T)	Percent of total consumption	Quantity (1,000 M/T)	Percent
China	701	21.9	1,616	27.5	+ 915	+ 131
India	574	17.9	1,100	18.7	+ 526	+ 92
Japan	417	13.0	572	9.7	+ 155	+ 37
FR Germany	159	5.0	260	4.4	+ 101	+ 64
Canada	199	6.2	295	5.0	+ 96	+ 48
U.K.	145	4.5	270	4.7	+ 125	+ 86
Poland	88	2.8	255	4.3	+ 167	+ 190
Others	920	28.7	1,509	25.7	+ 589	+ 64
Total	3,203	100.0	5,877	100.0	+ 2,674	+ 83

Source: Table 9.

Table 14. Rapeseed meal supply and utilization, 1980-81 through 1985-86 (in 1,000 metric tons).

	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85 Prelim	1985-86 Forecast
Production							
China	1,340	1,331	2,269	3,152	2,383	2,326	3,055
India	875	1,223	1,451	1,344	1,362	1,967	1,827
Fed. Rep. of Germany	455	560	511	786	717	840	811
Japan	583	686	678	669	728	840	780
Canada	521	574	551	522	688	725	790
United Kingdom	191	239	232	303	339	370	397
France	295	354	364	322	349	492	474
Poland	125	289	249	255	289	471	457
Dem. Rep. Germany	94	130	162	158	144	158	142
Czechoslovakia	49	120	100	119	180	171	150
Netherlands	52	70	130	134	164	180	180
Pakistan	141	151	135	140	125	120	130
Sweden	108	95	119	124	132	131	143
Bangladesh	91	91	88	81	84	90	90
USSR	3	7	14	25	38	30	54
Finland	31	51	45	54	57	55	58
Yugoslavia	17	38	34	34	48	53	51
Other	296	288	215	219	295	409	459
Total	5,267	5,297	7,347	8,441	8,122	9,428	10,048
Exports							
India	5	150	225	150	100	90	100
Canada	176	204	162	114	304	330	380
Fed. Rep. of Germany	87	109	108	133	101	140	100
Netherlands	34	59	115	122	155	170	150
France	129	172	144	82	90	207	184
Other	98	114	91	167	406	488	462
Total	529	808	845	768	1,156	1,425	1,376
Imports							
Netherlands	126	103	120	215	221	230	210
Fed. Rep. of Germany	202	207	166	142	365	340	340
Denmark	116	115	110	107	126	120	125
United Kingdom	30	55	81	63	80	120	105
Norway	84	59	85	86	76	90	98
Japan	7	3	23	58	86	75	80
United States	15	40	26	67	80	100	110
Belgium	41	27	34	35	36	35	35
Other	21	27	38	98	195	206	194
Total	642	636	683	871	1,265	1,316	1,297
Consumption¹							
China	1,331	1,327	2,256	3,044	2,086	2,066	2,795
India	870	1,073	1,226	1,194	1,262	1,877	1,727
Fed. Rep. of Germany	562	652	573	785	981	1,035	1,040
Japan	587	666	690	746	783	929	870
Canada	353	359	398	394	380	380	410
United Kingdom	188	254	305	325	400	490	485
Poland	125	289	254	309	299	379	423
Netherlands	144	114	135	227	230	240	240
France	165	182	230	237	266	295	285
Dem. Rep. of Germany	94	130	162	144	148	158	146
Czechoslovakia	49	120	100	119	180	171	150
Denmark	119	119	117	144	146	160	190
Pakistan	118	132	122	135	125	120	130
Sweden	106	86	117	105	120	128	151
Norway	79	54	78	93	92	94	93
Bangladesh	90	91	80	73	81	85	85
USSR	3	7	14	25	88	85	104
Belgium	54	45	38	40	47	54	57
Rep. of Korea	44	41	42	44	60	64	66
United States	15	40	26	67	80	100	110
Finland	28	48	50	45	62	60	58
Yugoslavia	17	30	30	46	48	53	51
Other	229	216	155	152	224	292	286
Total	5,370	6,075	7,198	8,493	8,188	9,315	9,952
Ending stocks	149	199	186	237	280	284	301

¹Consumption data represent "apparent consumption" and include all disappearance as well as some changes in stocks.

Source: Counselor and Attache Reports, Foreign Agricultural Service, Official Statistics, USDA Estimates, Oilseeds and Products, August 1985.

Table 15. Rapeseed meal production, major production countries, 1979-80 through 1985-86.

Country	Production				Change in production 1979-80 — 1985-86	
	1979-80		1985-86		Quantity (1,000 M/T)	Percent
	Quantity (1,000 M/T)	Percent of total production	Quantity (1,000 M/T)	Percent of total production		
China	1,340	25.4	3,055	30.4	+ 1,715	+ 128
India	875	16.6	1,827	18.2	+ 952	+ 109
FR Germany	455	8.6	811	7.8	+ 356	+ 78
Japan	583	11.1	780	7.9	+ 197	+ 34
Canada	521	9.9	790	7.9	+ 269	+ 52
UK	191	3.6	397	4.0	+ 206	+ 108
France	295	5.6	474	4.7	+ 179	+ 61
Poland	125	2.4	457	4.6	+ 332	+ 266
Other	882	16.8	1,457	14.5	+ 575	+ 65
Total	5,267	100.0	10,048	100.0	+ 4,781	+ 91

Source: Table 14.

Table 16. Rapeseed meal exports, major export countries, 1979-80 through 1985-86.

Country	Exports				Change in exports 1979-80 — 1985-86	
	1979-80		1985-86		Quantity (1,000 M/T)	Percent
	Quantity (1,000 M/T)	Percent of total exports	Quantity (1,000 M/T)	Percent of total exports		
India	5	1.0	100	7.3	+ 95	+ 1,900
Canada	176	33.3	380	27.6	+ 204	+ 116
FR Germany	87	16.4	100	7.3	+ 13	+ 15
Netherlands	34	6.4	150	10.9	+ 116	+ 341
France	129	24.4	184	13.4	+ 55	+ 43
Other	98	18.5	462	33.5	+ 364	+ 371
Total	529	100.0	1,376	100.0	+ 847	+ 160

Source: Table 14.

Table 17. Rapeseed meal imports, major importing countries, 1979-80 through 1985-86.

Country	Imports				Change in imports 1979-80 — 1985-86	
	1979-80		1985-86		Quantity (1,000 M/T)	Percent
	Quantity (1,000 M/T)	Percent of total imports	Quantity (1,000 M/T)	Percent of total imports		
Netherlands	126	19.6	210	16.2	+ 84	+ 67
FR Germany	202	31.5	340	26.2	+ 138	+ 68
Denmark	116	18.1	125	9.6	+ 9	+ 8
UK	30	4.7	105	8.1	+ 75	+ 250
Norway	84	13.1	98	7.5	+ 14	+ 17
Japan	7	1.1	80	6.2	+ 73	+ 1,043
U.S.	15	2.3	110	8.5	+ 95	+ 633
Belgium	41	6.4	35	2.7	- 6	- 15
Other	21	3.2	194	15.0	+ 173	+ 824
Total	642	100.0	1,297	100.0	+ 655	+ 102

Source: Table 14.

5. Rapeseed crude oil imports rose by almost 73 percent between 1983 and 1984.
6. Rapeseed crude oil imports accounted for 8.1 percent of vegetable oil imports in 1984, partly because total imports of vegetable oils decreased while imports of rapeseed oil increased.

7. Rapeseed cakes and meals imports increased by about 2.4 percent between 1983 and 1984, and while a significant change in major suppliers occurred. In 1983, China provided 88 percent of the Japanese imports; in 1984, the China supply dropped to 68 percent. The remainder of the imports were supplied by Canada.

Table 18. Rapeseed meal consumption, major consumption countries, 1979-80 through 1985-86.

Country	Consumption				Change in consumption 1979-80 — 1985-86	
	1979-80		1985-86		Quantity (1,000 M/T)	Percent
	Quantity (1,000 M/T)	Percent of total consumption	Quantity (1,000 M/T)	Percent of total consumption		
China	1,331	24.8	2,795	28.1	+ 1,464	+ 110
India	870	16.2	1,727	17.4	+ 857	+ 99
FR Germany	562	10.5	1,040	10.5	+ 478	+ 85
Japan	587	10.9	870	8.7	+ 283	+ 48
Canada	353	6.6	410	4.1	+ 57	+ 16
UK	188	3.5	485	4.9	+ 297	+ 158
France	165	3.1	285	2.9	+ 120	+ 73
Poland	125	2.3	423	4.3	+ 298	+ 238
Other	1,189	22.1	1,917	19.1	+ 728	+ 61
Total	5,370	100.0	9,952	100.0	+ 4,582	+ 85

Source: Table 14.

Table 19. Japanese imports of rapeseed, rapeseed oil and rapeseed meal, 1983 and 1984.

Source	1983		1984	
	Quantity (M/T)	Value (000\$)	Quantity (M/T)	Value (000\$)
Rapeseed				
Canada	1,090,721	317,418.7	1,199,887	434,537.2
China	11,350	3,091.3	26,028	8,643.2
France	—	—	38,784	17,572.7
Sweden	95,848	25,845.7	31,232	11,779.4
U.S.A.	3,480	1,257.9	2,867	1,023.0
FR Germany	3	5.0	4	6.9
Total	1,201,402	347,618.6	1,298,802	473,562.4
Total imports of all oilseeds	6,704,731	1,952,306.8	6,351,776	2,209,632.8
Rapeseed Oil (crude)				
Canada	3,788	1,703.7	17,836	15,698.3
China	—	—	929	608.6
E. Germany	752	623.1	—	—
Netherlands	1,004	457.3	497	467.9
Poland	—	—	1,025	673.8
Sweden	7,655	3,417.4	—	—
FR Germany	—	—	2,494	2,342.4
Total	13,199	6,201.5	22,781	19,791.0
Total imports of all vegetable oils	320,948	185,746.8	282,977	255,441.2
Rapeseed Cakes and Meals				
Canada	9,038	1,637.4	24,730	4,118.7
China	66,856	10,172.5	53,006	8,189.3
Total	75,894	11,809.9	77,736	12,308.0
Total imports of all vegetable oilseed cakes and meals	323,047	75,280.9	206,200	44,199.6

Source: Statistics for 1984 of Oilseeds, Oils and Oilcakes. The Japan Oil and Fat Importers and Exporters Association (Table 1).

Rapeseed Market — Table 21

Table 21 presents the domestic production and import situation in Japan for the two major oil bearing seeds — rapeseed and soybean. Significant changes include the following:

1. Production of rapeseed in Japan decreased by 4,000 M/T (57.1 percent) over the past 9 years while production of soybeans increased by 112,000 M/T (88.9 percent).
2. Imports of rapeseed increased by 640,000 M/T (97.1 percent), while imports of soybeans increased by 1,181,000 M/T (35.4 percent) over the 9-year period.
3. In 1975, total domestic production plus imports of rapeseed amounted to 16 percent of combined domestic production and imports of soybeans and rapeseed. By 1984, this had increased to 21.5 percent. Thus, use of rapeseed vs. soybean has increased in Japan.

Table 20. Japanese imports of rapeseed, rapeseed oil and rapeseed meal, 1983 and 1984.

Source	% of total imports		Change in imports 1983-1984	
	1983	1984	Quantity (M/T)	%
Rapeseed				
Canada	90.7	92.4	+ 109,166	+ 10
China	1.0	2.0	+ 14,678	+ 129
France	—	3.0	+ 38,784	—
Sweden	8.0	2.4	- 64,616	- 67
U.S.A.	0.3	0.2	- 613	- 18
FR Germany	—	—	+ 1	+ 33
Total	100.0	100.0	+ 97,400	+ 8.0
Total imports of all oilseeds	17.9*	20.4*	- 352,955	- 5.3
Rapeseed Oil (Crude)				
Canada	28.7	78.3	+ 14,048	+ 371
China	—	4.1	+ 929	—
E. Germany	5.7	—	- 752	—
Netherlands	7.6	2.2	- 507	- 50
Poland	—	4.5	+ 1,025	—
Sweden	58.0	—	- 7,655	—
FR Germany	—	10.9	+ 2,494	—
Total	100.0	100.0	+ 9,582	+ 72.6
Total imports of all vegetable oils	4.1*	8.1*	- 37,971	- 11.8
Rapeseed Cakes and Meals				
Canada	11.9	31.8	+ 15,692	+ 174
China	88.1	68.2	- 13,850	- 21
Total	100.0	100.0	+ 1,842	+ 2.4
Total imports of all vegetable oilseed cakes and meals	23.5*	37.7*	- 116,837	- 36.2

*Percent of total oilseed and/or products imports accounted for by rapeseed and/or products.

Source: Table 19.

Table 21. Domestic production of main oil bearing seed (Ministry of Agriculture, Forestry and Fisheries).

Year	Rapeseed			Soybean		
	Domestic production (A)	Import (B)	Total (A)+(B)	Domestic production (A')	Import (B')	Total (A')+(B')
(Unit: metric ton)						
1975	7,000	659,000	666,000	126,000	3,334,000	3,460,000
1976	6,000	718,000	724,000	110,000	3,554,000	3,664,000
1977	5,000	769,000	774,000	111,000	3,602,000	3,713,000
1978	5,000	823,000	828,000	190,000	4,260,000	4,450,000
1979	5,000	1,122,000	1,127,000	192,000	4,131,000	4,323,000
1980	4,000	1,059,000	1,063,000	174,000	4,400,000	4,574,000
1981	4,000	1,169,000	1,173,000	212,000	4,197,000	4,409,000
1982	4,000	1,204,000	1,208,000	226,000	4,344,000	4,570,000
1983	3,000	1,201,000	1,204,000	217,000	4,995,000	5,212,000
1984	3,000	1,299,000	1,302,000	238,000	4,515,000	4,753,000

Source: Statistics for 1984 of Oilseeds, Oils and Oilcakes. The Japan Oil and Fat Importers Association (Table 4).

Rapeseed Market — Table 22

Table 22 presents the volume of vegetable oils produced in Japan for the years 1977 through 1984. Notable facts include:

1. Rapeseed oil and soybean oil production accounted for 76.4 percent (1,185,918 M/T) of total oil production in Japan in 1984. This compares to 72.9 percent (838,456 M/T) in 1977. Overall, production of oil from these two commodities increased by 41.4 percent over the 8-year period, an annual growth of 5.2 percent.
2. Production of rapeseed oil increased by 211,682 M/T (69 percent) between 1977 and 1984. In 1977, rapeseed oil production accounted for 26.7 percent of total oil production in Japan; in 1984, rapeseed oil percentage had increased to 33.4.

Rapeseed Market — Table 23

Table 23 presents the volume of vegetable oilseed cakes and meals produced in Japan for years 1977 through 1984. Significant figures are:

1. Soybean meal is the dominant meal produced in Japan, accounting for 66.8 percent of total meal production in 1984. Rapeseed meal is second in importance, accounting for 17.4 percent, followed by rice meal, 8.8 percent.
2. Soybean meal has maintained its position over the years, accounting for 66.6 percent of total meal production in 1977. Rapeseed meal has increased its position by 4.4 percent (from 13.0 percent in 1977 to 17.4 in 1984).
3. Total meal production increased by 29.7 percent between 1977 and 1984, with soybean meal production

Table 22. Production of vegetable oil (Ministry of Agriculture, Forestry and Fisheries).

Item	1977	1978	1979	1980	1981	1982	1983	1984
(Unit: metric ton)								
Castor oil	17,884	16,809	13,603	15,076	10,393	11,649	16,566	22,052
Coconut oil	60,231	59,041	35,201	43,952	47,084	53,271	44,751	47,322
Corn oil	35,839	43,863	58,696	66,133	70,521	74,110	76,193	77,301
Cotton seed oil	18,123	19,638	14,078	13,433	13,187	14,010	14,050	16,031
Kapok seed oil	2,055	936	—	59	—	—	9	58
Linseed oil	37,372	38,041	39,620	42,821	39,665	37,697	44,305	35,262
Palm kernel oil	5,537	2,918	4,214	6,871	6,175	5,860	6,993	8,596
Peanut oil	177	384	43	574	499	765	501	471
Rapeseed oil and mustard seed oil	306,860	352,500	433,917	406,617	487,366	484,652	490,089	518,542
Rice bran oil	98,458	101,083	107,188	102,665	98,141	97,019	90,949	88,133
Safflower seed oil	6,553	8,330	7,441	9,247	7,755	5,318	8,283	9,799
Sesame oil	13,890	15,521	17,954	17,575	18,686	21,635	22,746	23,798
Soybean oil	531,596	598,186	620,968	618,109	634,424	634,241	695,829	695,563
Sunflower seed oil	—	—	—	—	—	2,642	—	—
Other vegetable oil	16,340	11,475	4,124	12,689	12,451	12,587	7,846	9,022
Total	1,150,915	1,268,725	1,357,047	1,355,268	1,446,347	1,455,456	1,519,090	1,551,950

Source: Statistics for 1984 of Oilseeds, Oils and Oilcakes. The Japan Oil and Fat Importers and Exporters Association (Table 5).

Table 23. Production of vegetable oil seed cakes and meals (Ministry of Agriculture, Forestry and Fisheries).

Item	1977	1978	1979	1980	1981	1982	1983	1984
(Unit: metric ton)								
Castor oil cakes	22,032	17,748	15,740	16,673	11,619	12,921	18,535	24,831
Copra cakes and meals	33,327	30,281	17,643	22,313	23,933	27,129	22,556	23,977
Corn cakes	39,428	45,431	64,439	73,904	75,253	74,495	82,280	88,943
Cotton seed cakes	48,884	49,839	39,847	42,706	38,993	44,976	43,065	49,734
Kapok seed cakes	7,817	3,495	—	235	—	—	37	213
Linseed cakes	50,876	56,103	59,283	65,828	60,765	59,822	68,592	55,807
Palm kernel cakes	5,654	2,923	4,485	7,143	6,325	5,862	7,281	8,818
Peanut cakes	445	1,467	83	1,136	935	1,456	1,004	823
Rapeseed cakes and mustard seed cakes	436,112	484,909	616,719	582,939	686,248	690,075	684,361	754,447
Rice bran cakes and meals	437,498	442,341	459,902	439,775	419,276	417,609	391,442	382,631
Safflower seed cakes	8,511	13,039	11,347	14,870	12,378	8,792	13,692	15,252
Sesame seed cakes	13,798	15,817	16,940	16,508	17,402	19,893	20,749	21,241
Soybean cakes and meals	2,225,017	2,542,472	2,644,847	2,692,837	2,726,424	2,800,356	3,051,589	2,895,099
Sunflower seed cakes	—	—	—	—	—	4,250	—	—
Other various seed cakes and meals	12,468	14,567	5,864	16,372	16,043	15,722	11,113	12,301
Total	3,341,867	3,720,432	3,957,139	3,993,239	4,095,594	4,184,408	4,416,296	4,334,117

Source: Statistics for 1984 of Oilseeds, Oils and Oilcakes. The Japan Oil and Fat Importers and Exporters Association (Table 6).

Table 24. Consumption of oils for edible and inedible purposes during 1984 calendar year (Ministry of International Trade and Industry and Ministry of Agriculture, Forestry and Fisheries).

Item	Vegetable oils (direct use)	Margarine shortening oils and fats	Other processing oils and fats	Paint	Printing ink	Fatty acid	Soap	Fatty alcohol	Others	Total	Processing Hardened oils	
											For edible	For inedible
(Unit: metric ton)												
Beef tallow	—	10,100	49,840	—	—	90,993	48,755	1,907	2,456	204,051	13,712	4,222
Castor oil	—	—	—	—	—	622	82	—	22,147	22,851	—	2,298
Coconut oil	—	11,819	11,546	—	—	17,449	12,033	8,533	7,179	68,559	11,787	—
Corn oil	54,341	24,203	2,848	—	—	—	—	—	—	81,392	13,124	—
Cotton seed oil	16,765	7,699	6,852	—	—	—	—	—	—	31,316	6,582	—
Fish oil	—	117,879	5,263	—	—	1,224	63	255	10,819	135,503	123,142	—
Kapok seed oil	—	—	—	—	—	—	—	—	58	58	—	—
Lard	—	14,037	121,319	—	—	51,145	4,746	—	—	191,247	14,273	10,158
Linseed oil	—	—	—	8,820	8,860	—	—	—	14,796	32,476	—	—
Olive oil	780	—	—	—	—	—	—	—	791	1,571	—	—
Palm kernel oil	—	5,642	4,536	—	—	4,476	302	—	1,693	16,649	9,798	—
Palm oil	—	65,520	88,968	—	—	2,139	1	1,269	7,532	165,429	21,292	5,906
Rapeseed oil	408,053	33,044	82,606	—	—	—	—	—	10,000	533,703	28,473	—
Rice bran oil	18,912	5,231	33,602	—	—	10,038	3,044	—	19,918	90,745	737	894
Safflowerseed oil	13,046	1,564	1,271	1,529	—	—	—	—	—	17,410	259	—
Sesame seed oil	20,944	—	—	—	—	—	—	—	10	20,954	—	—
Soybean oil	492,725	76,793	97,364	6,000	—	—	—	—	30,000	702,882	41,249	—
Sunflower seed oil	16,745	—	100	—	—	—	—	—	—	16,845	—	—
Tung oil	—	—	—	1,475	—	—	—	—	9,991	11,466	—	—
(Baleen) whale oil	—	—	—	—	—	—	—	—	1,267	1,267	—	—
(Sperm) whale oil	—	—	—	—	—	—	—	1,159	2,864	4,023	—	81
Other oil	1,054	14,900	13,314	13,927	8,041	63,373	4,203	2,689	—	121,501	6,894	18,396
Total	1,043,365	388,431	519,429	31,751	16,901	241,459	73,229	15,812	141,521	2,471,898	291,322	41,955

Source: Statistics for 1984 of Oilseeds, Oils and Oilcakes. The Japan Oil and Fat Importers and Exporters Association (Table 7).

increasing by 30.1 percent and rapeseed meal by 73.0 percent.

Rapeseed Market — Table 24

Table 24 presents a breakdown of vegetable oil consumption in Japan for 1984. Significant figures include:

1. Of total consumption, 78.9 percent is for edible purposes.
2. Rapeseed oil accounts for 26.8 percent of total edible oil consumed; soybean oil, 34.2 percent.
3. Virtually all (98.1 percent) of the rapeseed oil consumed in Japan is for edible purposes.

Summary

1. Annual carryover of oilseeds has been increasing in recent years because the rate of increase in production has exceeded the rate of increase in crush.
2. Total world oilseed crush has been increasing at about the rate of world population increase. This indicates a saturated market, with increased demand resulting only from population increases.
3. World exports of oilseeds appear to have leveled out over recent years. This indicates that major consuming countries are exerting considerable effort to become self-sufficient in the production of oilseeds, if production is possible.
4. The share of world oilseed production, exports and crush accounted for by rapeseed is increasing slowly. Rapeseed accounts for less than 10 percent, however, and thus does not impact the world market.
5. Significant increases in rapeseed marketings can be achieved only if rapeseed successfully competes with other oilseeds, particularly soybeans.
6. The rapeseed oil market is limited. Countries that are major consumers of rapeseed oil apparently prefer to produce their own rapeseed or to import rapeseed to meet their oil production needs.
7. The rapeseed meal market also appears to be quite limited.
8. Japan is the major potential market for rapeseed. Other major importers are members of the European Economic Community (E.C.), which greatly limits opportunities for market expansion by countries not members of the E.C.
9. Over the past few years, production of rapeseed oil in Japan has been increasing significantly (over 5 percent annual average increase). As a result, rapeseed oil has achieved an increased share of the total vegetable oil production in the country.
10. The Japanese market for rapeseed will probably continue to grow, at least at the rate of population growth in Japan. Limited available land area will prohibit any expansion in rapeseed acreage, so

domestic needs for rapeseed will have to be supplied by imports.

11. The major market for rapeseed oil in Japan is for the edible type.
12. The major supplier of rapeseed for export is Canada, followed by France and Denmark. Thus, U.S.-produced rapeseed must be competitive with rapeseed marketed from these countries.
13. A limited potential market exists in Japan for:
 - edible rapeseed, and
 - rapeseed that can compete in quality and price with Canadian rapeseed.
14. The market for rapeseed appears to be relatively volatile. Changes in world production can significantly impact available markets. Thus, as is the case with most agricultural products, potential markets must be approached with cautious optimism.
15. While rapeseed and rapeseed oil are established products in world trade, it would appear, at this time, that quality and price must be competitive to make additional progress in world markets.

Update

To illustrate the volatility of the world rapeseed situation, estimates just released for 1985-86 have altered the information presented in this bulletin in the following ways:

1. The estimated production of rapeseed in China has been increased from 5.5 million M/T to 5.6 million M/T. This is a new record.
2. The estimated production of rapeseed in India has been increased from 3.0 million M/T to 3.5 million M/T. This is a new record.
3. E.C. rapeseed production is confirmed at 3.66 million M/T, a new record. This production is due to a 7.5 percent increase in area available for harvest and unusually high yields.
4. Canada is facing disposal problems caused by the record crop in the E.C. that lowered demand for Canadian exports to the E.C. by significant increases in exports from Poland to the E.C. and by sluggish demand from the Japanese. Crushers in Japan appear to prefer soybeans for the time being.
5. Australia has dramatically increased production over the past 3 years — 82,000 M/T this year, 29,000 M/T last year and 7,000 M/T 3 years ago.
6. As a result of increased production and crushing, world rapeseed oil stocks as of October 1, 1986, are predicted to be up 14 percent over last October.
7. Production of palm oil is increasing significantly, 18 percent over last year. In addition, thousands of acres of palm trees that have been and are being planted in Indonesia and Malaysia will increase the market supply still more when they reach bearing age.



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