

Supplies increasing

Prices recede, world consumption continues to rise

Fats and oils prices have receded from the highs of 18 months ago as worldwide supplies have increased. The initial forecasts for 1985/86 predict continued plentiful supplies, assuming normal growing conditions for northern hemisphere crops now in the ground and southern hemisphere crops to be planted later this year.

The price swings of recent years are shown in Table I. The high prices came during the 1983/84 marketing year when U.S. oilseed supplies had been reduced by a drought and a government crop acreage reduction program, and when Malaysian palm oil supplies dipped. But those high prices spurred

producers to increase acreage for the 1984/85 marketing year. Rains fell, breaking dry spells in the United States and parts of South America and Africa, including South Africa and Nigeria. Malaysian palm oil production rebounded from 3.1 million metric tons (MT) during 1983 to about 3.7 million MT for 1984 and may top 4.0 million MT in 1985.

World oilseed production totaled about 166.6 million MT for 1983/84 and may reach a record 187 million MT for 1984/85. Total world vegetable and marine oil production is estimated by the USDA at 43.3 million MT for 1983/84 and is forecast at 46.7 million

MT for 1984/85. Table II includes production of butter, tallow and grease as well as vegetable and marine oils. That total comes to 59.62 million MT. Unilever PC issued an estimate of 68.15 million MT of fats and oils for 1984/85 at the International Association of Seed Crushers meeting in Rome during May. That included estimates for lard of about 5.2 million MT. Unilever production statistics were higher than USDA statistics for soybean (about 1.3 million MT) and olive oil.

Oil prices at the start of the northern hemisphere's 1985 growing season were above price levels of two years ago and thus remained an incentive for increased plantings. Crush margins in the United States reached \$17/MT in September and October 1984, dipped to \$8/MT from December through February and climbed to \$14/MT in April 1985. Soy oil represented about 57% of the value of a bushel of soybeans in April, unusually high. Oil meal, however, was in surplus and had driven meal prices to 12-year lows, according to *Oil World*, the international weekly fats and oils market report. The low prices were stimulating increased disappearance in the U.S., Brazil and Argentina, *Oil World* said, with increasing soy meal exports reported from Paraguay, China and India.

Oil World speculated that meal demand would continue to rise, with relatively more oil being stockpiled. The publication said Oct. 1, 1985

TABLE I

Selected Vegetable Oil Prices (in US Dollars per Metric Ton)

	Soybeans		Cottonseed		Sunflowerseed		Peanut		Palm	Rapeseed	Palm
	US ^a	Rott ^b	US ^c	Rott ^d	US ^e	Rott ^f	US ^g	Rott ^h	Rott ⁱ	Rott ^j	Rott ^k
1978/79 average	\$603	\$654	\$697	\$780	\$725	\$768	\$798	\$990	\$652	\$628	\$970
1982/83											
April	428	434	471	599	442	452	554	495	419	402	576
May	435	434	516	621	463	464	582	548	432	427	622
1983/84											
April	706	772	692	870	772	825	1,160	1,159	841	754	1,150
May	857	914	899	980	948	955	1,281	1,171	951	869	1,314
1984/85											
April	741	693	681	750	750	703	908	1,020	653	677	769

^aAverage wholesale, crude, tank, Decatur; ^bDutch, FOB ex-mill Rotterdam; ^cCrude tank cars, FOB, Valley points; ^dUS PBSY, CIF Rotterdam; ^eFOB Minneapolis; ^fAny origin, ex-tank, Rotterdam; ^gCrude, tank cars, FOB SE Mills; ^hAny origin, CIF Rotterdam; ⁱSumatra/Malaysia, CIF NW Europe; ^jFOB ex-mill Rotterdam; ^kPhilippines/Indonesia, CIF Rotterdam.
Source: USDA FAS Oilseeds and Products (FOP 5-85).

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stocks of soybean, sunflower, cottonseed, rapeseed, palm, palm kernel and coconut oils could be significantly higher than they were a year ago.

As should be expected, the larger supplies and lower prices have led to increased international trade. World fats and oils exports are estimated at 13.9 million MT for 1983/84 and forecast to be 14.8 million MT for 1984/85. Exports have risen for palm, sunflower, rapeseed, cottonseed, coconut and palm kernel oils; exports have declined for soybean, peanut and fish oils. Soy oil prices in the United States have remained relatively high because of tight supplies. There were some reports of less expensive South American soybean oil being imported to U.S. gulf ports from Brazil and Argentina, reportedly for transshipment.

Oil World estimated the Soviet Union would be the world's leading importer of fats and oils in 1984/85 with about 1.57 million MT of imports. The Soviets entered the marketing year with relatively low stocks, the domestic harvest of oil-bearing crops was below average, and domestic demand was rising. India, which for many years has been the world's leading importer, was expected to total about 1.48 million MT of imports during 1984/85, according to *Oil World*.

World consumption of vegetable and marine oils continues to rise (Table III). The world's two most populous nations, China and India, showed 11.4% and 4.3% increases, respectively, from 1983/84 to 1984/85. Algerian fats and oils consumption jumped 57%; Romania, Yugoslavia, The Philippines, Australia and Korea all showed increases of more than 20%.

While it may be too early to put

numbers to the 1986 production forecasts, U.S. soybean production is expected to hold steady with increased yields on reduced acreage. Initial projections were for a harvest of 1.93 billion bushels. Malaysian palm oil output is expected to rise. The Soviet Union expects a rebound from relatively low sunflowerseed production in 1984/85. Brazil, Argentina and Paraguay are expected to plant more oilseed acreage for the 1986 harvest. Copra production

in The Philippines is improving, but recovering at a slower rate from a 1983 drought than had been thought earlier this year. Indonesian copra production also is rising. Australia and Poland are not expected to match last year's harvests.

The individual country summaries that follow are based primarily on reports by agricultural officers at U.S. embassies around the world, but data from other sources also was used.



TABLE III

Major Vegetable and Marine Oil Consumption by Country (in 1,000 Metric Tons)

	1974/75	1979/80	1983/84	1984/85
United States	4,431	5,224	5,522	5,724
India	2,489	3,767	4,566	4,763
USSR	3,083	3,117	3,281	3,275
China	2,061	2,642	4,117	4,588
Brazil	886	1,669	1,686	1,744
Japan	1,091	1,447	1,658	1,705
Germany, Fed. Rep.	1,121	1,429	1,509	1,533
Indonesia	624	863	1,727	1,614
Italy	1,017	1,285	1,302	1,297
United Kingdom	785	1,013	1,103	1,113
Nigeria	640	837	922	948
France	716	844	778	907
Pakistan	390	607	842	958
Netherlands	547	688	779	796
Spain	762	732	711	810
Mexico	422	564	790	852
Turkey	459	541	665	658
Egypt	414	440	542	621
Malaysia	148	354	486	538
Canada	319	458	475	543
Romania	201	337	320	417
Iran	297	349	358	377
Poland	277	303	327	359
Yugoslavia	251	304	252	308
Argentina	382	351	421	398
South Africa	195	297	241	262
Venezuela	152	223	307	291
Colombia	151	282	290	324
German Dem. Rep.	214	196	244	269
Belgium	168	272	309	355
Algeria	128	197	195	307
Greece	227	242	257	273
Philippines	184	210	265	327
Zaire	161	203	198	203
Peru	201	188	155	141
Portugal	113	167	218	226
Morocco	186	236	257	277
Taiwan	132	164	230	235
Australia	101	158	226	276
Bangladesh	133	160	200	206
Burma	92	117	219	239
Czechoslovakia	127	95	206	213
Bulgaria	122	158	154	168
Korea, Rep. of	26	100	205	252
Ecuador	31	110	176	200
Denmark	113	128	133	143
Thailand	59	124	142	147
Iraq	121	131	178	215
Saudi Arabia	4	131	163	173
Subtotal	26,864	34,454	40,317	42,668
Rest of world	2,533	3,279	3,508	3,857
World total	29,397	37,733	43,825	46,525

TABLE II

World Production of Selected Fats and Oils (1,000 Metric Tons)

	1983/84	1984/85
Soy	12,920	13,330
Palm	6,120	6,970
Sunflower	5,620	6,250
Rapeseed	5,040	5,540
Cottonseed	3,450	4,200
Coconut	2,340	2,640
Olive	1,650	1,650
Palm Kernel	840	880
Linseed	720	610
Fish	1,350	1,370
Butter (product weight)	6,770	6,600
Tallow and grease	6,280	6,270
Totals	56,290	59,620

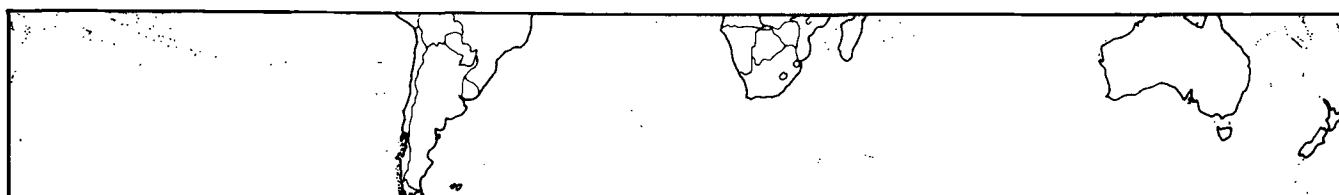
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TABLE IV

Oilseed, Palm Oil Production in Selected Nations (1,000 Metric Tons)

	Soybeans		Cottonseed		Peanuts		Sunflower		Rapeseed		Palm oil	
	83/84	84/85	83/84	84/85	83/84	84/85	83/84	84/85	83/84	84/85	1985	1984
United States	44,520	50,648	2,790	4,670	1,490	2,000	1,450	1,700				
Brazil	15,200	16,500	990	680	220	270						
China (Mainland)	9,760	9,700	9,270	12,150	3,950	4,810	1,370	1,706	4,290	4,190		
Argentina	6,770	6,600			310	260	2,200	3,400				
Paraguay	550	750										
USSR			4,900	4,680			5,040	4,500				
India			2,690	2,760	7,280	6,500			2,570	2,900		
Pakistan			1,020	1,940								
Senegal					570	630						
Sudan					460	500						
South Africa					70	170						
Spain							750	950				
Canada									2,630	3,150		
Malaysia											3,325	3,900
Indonesia											1,022	1,023
Nigeria											340	320
Totals	82,360	90,270	27,640	34,130	18,820	19,930	15,410	17,650	14,210	16,480	5,796	6,459

(Totals include production in other nations not included on chart.)

Source: USDA reports, *Oil World*.

Argentina

Argentine soybean production is estimated at 6.6 million metric tons (MT) for 1985 and could reach 7.0 million MT in 1986, according to a USDA report.

Total oilseed production for 1985 is estimated at 11.6 million MT, with about 2.99 million MT exported and 7.57 million MT crushed. Of the approximate 5.0 million MT of meal produced, about 4.4 million MT will be exported. Oil production is estimated at 1.85 million MT for 1985, with 1.45 million MT exported and 361,000 MT consumed domestically in food products.

Soybean production in 1984 was about 6.77 million MT, with exports of 3.13 million MT and a domestic crush of 3.64 million MT. Comparable figures for 1985 are expected to be: production, 6.6 million MT; exports, 2.45 million MT, and crush, 3.85 million MT. Forecasts for 1986: production, 7.0 million MT; exports, 2.45 million MT, and crush, 4.25 million MT.

Sunflowerseed acreage and production is rising faster than soybean acreage. Harvested sunflower acreage in 1984 was 1.99 million hectares, and

in 1985, 2.35 million hectares. It is estimated at 2.65 million hectares in 1986. Production for those years is estimated or forecast at 2.2 million MT, 3.4 million MT and 3.2 million MT, respectively.

Sunflowerseed oil is the preferred domestic edible oil in Argentina. Whereas about 85% of soy oil production is exported, sunflower oil exports are more likely to be about 75% of production. In 1985, soy oil production is estimated at 635,000 MT with exports of 550,000 MT; sunflower oil production is estimated at 1.09 million MT with exports of 820,000 MT and domestic consumption of 265,000 MT.

Crush capacity in Argentina continues to rise, with another 300,000 MT to 500,000 MT expected to come on stream in 1986. One estimate of Argentine crushing capacity at present is 9.0 million MT. In addition to new plants, crushing capacity has been increased in recent years by small-scale plant expansions.

In mid-June, Argentina announced plans to revise the nation's currency standard, abandoning the peso and creating a new monetary unit called the "austral." The new unit would be worth approximately 1,000 old pesos.

In addition, a freeze was announced on prices and wages. The success of the program apparently would hinge on acceptance of the price and wage freeze.

Australia

Australian oilseed production for 1985 may reach a record 821,000 metric tons (MT) with an increase in fats and oils production of 50,000 MT to 185,000 MT, according to reports from USDA observers in Canberra.

Cottonseed and sunflowerseed are major contributors to the record crop. Cottonseed production in 1985 is forecast at 359,000 MT, compared to 230,000 MT in 1984; 1985 sunflowerseed production is forecast at 261,000 MT, compared to 170,000 MT in 1984. Other anticipated 1985 production levels (with 1984 figures in parentheses) include: rapeseed, 37,000 MT (17,000 MT); peanuts, 53,000 MT (47,000 MT), and soybean, 105,000 MT (89,000 MT).

Australia still will import about 81,000 MT of fats and oils to meet domestic consumption needs of about 265,000 MT during 1985, but the increased supply of domestic cotton-

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seed oil is expected to mean declining imports of soybean, coconut and palm oils in future years. Expected 1985 production for major oils is: sunflowerseed, 90,000 MT; cottonseed oil, 57,000 MT; soybean, 20,000 MT, and rapeseed, 14,000 MT. Production estimates in 1984 for the four oils were, respectively, 65,000 MT, 40,000 MT, 21,000 MT and 7,000 MT.

Initial forecast for 1986 is for oilseed production to decline to 779,000 MT and fats and oils production of 170,000 MT, with fats and oils imports dropping slightly to 78,000 MT.

Bangladesh

Despite recent 5% annual increases in oilseed production, Bangladesh domestic oilseed production provides, normally, only about one-fourth of the domestic fats and oils requirements.

High prices worldwide for edible oils during 1984/85 led to a reduction in edible oil imports to about 100,000 metric tons (MT) compared to the previous season's 145,000 MT. Domestic vegetable oil production rose 7%, partly in response to the high prices, and provided about 31% of domestic consumption.

Domestic vegetable oil production for 1985/86 is expected to be about the 60,000 MT figure of 1984/85; imports could rise again to about 150,000 MT if prices are lower. During 1985/86, fats and oils consumption is expected to include 190,000 MT of liquid edible oils, 10,000 MT of shortening-type products and about 35,000 MT in soap products.

The one government-owned oil refinery is planning to increase its capacity to 21,000 MT during 1985/86 from the present 14,500 MT. There are eight other private or quasi-private refineries. Domestic crushing capacity is estimated at 575,000 tons, about one-third of which is mechanical pressing and the rest in indigenous (bullock-powered hullers) methods.

Brazil

Brazilian oilseed production for 1985 should total more than 18.0 million metric tons (MT), another record paced by a record 16.5 million MT of soybeans.

Soybean production could continue to grow in 1986 as new land is brought into production.

Brazil's exports of whole soybeans are expected to climb to 2.5 million MT, from 1.6 million MT, because of several factors. One factor is relatively weaker demand for meal; another is lower crushing margins, and another is reduced government subsidies for meal and oil exports. Brazil's 1985 meal exports are forecast to be 7.7 million MT, below levels of recent years.

Vegetable oil production for 1985 is estimated at 2.7 million MT, up slightly from 1984's estimated 2.6 million MT. About 1.1 million MT of oil are exported. Soybean oil dominates domestic edible vegetable oil markets, accounting for 1.6 million MT of the 1.7 million MT consumed.

USDA observers said trends are changing from when government financing programs favored export of soy products, rather than soybeans. Most subsidies on export products have been eliminated, a USDA report said. Lower meal demand and other economic factors meant that, earlier this year, Brazil's crushing industry was operating at about 55% of its 25-million MT capacity.

A variety of factors, including prices for alternate crops, could lead to a slight increase in soybean acreage to 9.5 million hectares in 1986 from 9.45 million hectares in 1985. Reduced international cotton prices are expected to trigger a reduction to 1.9 million hectares in 1986 from 2.2 million hectares in 1985; peanut acreage for 1986 is expected to remain stable at 210,000 hectares; Brazil has about 15,000 hectares planted to oil palm and 3,000 hectares in sunflower.

Inflation remains a factor in the

soybean economy. In Rio Grande do Sul, a major soybean producing state, the price for a kilogram of soybeans in January 1984 was 235 cruzeiros; in December 1984, the price for a kilogram of soybeans was 565 cruzeiros. In January 1984, the cruzeiro was valued at 1,075 per U.S. dollar; in December 1984 the valuation was 3,168 per U.S. dollar.

Canada

Canada's 1985 rapeseed acreage will be smaller than the record year of 1984 when 3.15 million metric tons (MT) were harvested from nearly three million hectares.

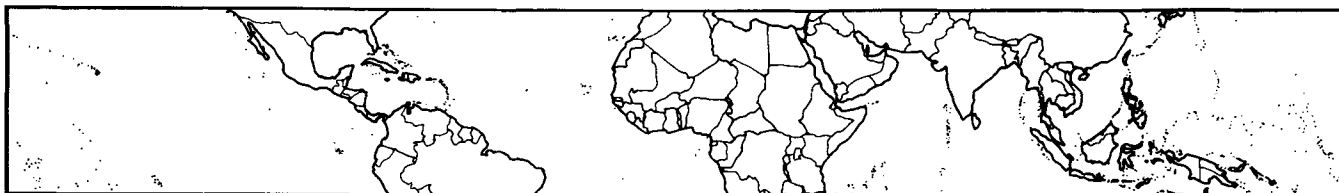
Initial estimates were for a harvest from about 2.75 million hectares producing 2.9 million MT. Total crush for the 1984 crop is estimated at a record 1.25 million MT with a possible crush of 1.3 million MT next year, using some of the 320,000 MT stocks expected to be carried over from the 1984 crop. Crushing capacity utilization has been 65% to 70% in recent years, a USDA report said.

The U.S. Food and Drug Administration's approval of low erucic acid rapeseed oil in food products may spur increased use not only in the U.S., but in nations that often accept U.S. food standards. Such nations include those in Latin America and the Middle East and Far East.

Increased European rapeseed production means lower exports from Canada to Europe, but also means Canada should have sufficient supply to satisfy Japanese demand for the first time in four years. Japan historically has taken about 90% of Canada's exports but in recent years had been limited to about 75%.

China

Mainland China's oilseed production should reach a record 31.2 million metric tons (MT) for 1984/85, including the first ever 11-million MT



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cottonseed crop and the first 10-million MT soybean crop since the 1950s.

The Chinese government does not include soybean and cottonseed in its statistics on oilseeds. China's production of cottonseed is more than twice that of the next largest producing nation, but processing facilities are lacking so that most cottonseed is used by the growers, who may press the seed to get oil for edible use and then use the meal for fertilizer.

China's annual per capita edible oil consumption is estimated at about 6 kilograms, which would make annual domestic consumption about 6.4 million MT. A report from USDA observers in China notes that different oils are preferred in different parts of China. In the northeast, the preference is for soybean oil; in north central China, peanut oil is preferred; in inner Mongolia, a sunflower-growing region, linseed is preferred; along the Yangtze River, rapeseed oil is the main edible oil, but consumers are said to prefer lard, and southwest China favors peanut oil. Rapeseed oil is distributed through the ration program, but is not available on the open market because there is so little demand, according to the USDA report.

A lack of modern processing facilities has kept China from making better use of its oil crops or from developing them as export crops. China's rapeseed oil, for example, is high erucic acid oil which will be barred from Hong Kong soon because of regulations requiring less than 5% erucic levels in edible rapeseed oil. The Chinese reportedly are interested in acquiring the necessary processing equipment to meet the restriction. The USDA report said the Chinese are just beginning to develop solvent oil extraction and meal processing methods that are accepted elsewhere. China has viewed soybeans primarily as a food for direct consumption (with about a fifth of the crop being crushed), as a cash crop and lastly as a protein source for animal feed, the report said.

There was a report in June that

Nisshin Oil Mills of Japan would participate in a project to build a 1,000 MT per day crushing plant at Dalien, China.

TABLE I
Chinese Oilseed Production (1,000 MT)

	1981	1983	1984
Rapeseed	4065	4287	4060
Peanuts	3826	3951	4480
Sunflowerseed	1332	1370	1400
Sesame	510	349	300
Soybeans	9330	9760	10000
Cottonseed	5937	9274	11000
Total	25000	28991	31240

Columbia

Colombia's increasing domestic palm oil supply is reducing dependence on edible oil imports to meet domestic requirements.

Palm oil production in 1984 was about 118,000 metric tons (MT). It is estimated at 132,000 MT in 1985 and forecast at 146,000 MT by 1986. With about 35,000 MT each of cottonseed oil and soybean oil, palm helps provide the bulk of domestic oil production estimated at 212,000 MT in 1985 and 229,000 MT for 1986. Imports of 75,000 to 80,000 MT of soybean oil and about 35,000 MT of fish oil provide the major outside source of edible oils.

Domestic oilseed markets are protected through import quotas and high import duties.

During the decade ending in 1984, oil palm acreage grew more than 10% a year, to about 61,000 hectares. That expansion has slowed due to restraints on seed imports, higher import duties and social unrest in potential planting areas, a USDA report said. Production is expected to increase as previously planted areas come into production and mature, but the rate of increase will slow in later years.

Denmark

Denmark is increasing its production of low-erucic, low-glucosinolate rape-

seed which has led to increased use of rapeseed oil in the food industry, especially in margarine and salad oils.

Rapeseed acreage reached 191,000 hectares for 1983/84, but is estimated at 185,000 hectares for 1984/85. Production is expected to decline from 517,000 MT in 1984/85 to 370,000 MT in 1985/86.

Vegetable oil imports for 1985 are expected to be about 45,000 MT, about 5,000 MT less than in 1984. Domestic oil production in 1985 is estimated at 138,000 MT, expected to rise to 154,000 MT in 1986.

Dominican Republic

The first commercial quantities of palm oil are expected to be produced in 1985 with about 4,000 metric tons (MT) available, or about 5% of total consumption.

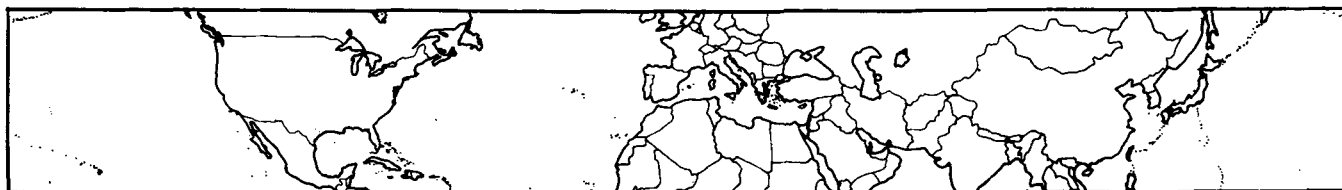
The Dominican Republic continues to produce less than a third of its total fats and oils imports, a trend expected to continue. Imported soybean oil is the main edible oil, with local crushers importing some soybeans. The subsidized price of imported oil is lower than the price of oil produced by the local crushers. Total oil consumption for 1985 is estimated at 79,000 MT, with about 69,000 MT being imported. Soybean oil imports are estimated at 42,000 MT (including 31,000 MT from the U.S. and 4,000 MT each from Argentina and Brazil); sunflower oil imports are estimated at 23,000 MT, all from the U.S.

Price increases of about 75% in 1984 led some consumers to switch to lard from vegetable oils. Total fats and oils consumption fell only 4%, a USDA report said.

Ecuador

Ecuador's oilseed production has risen dramatically following a return to more normal weather following heavy rains that reduced 1984 production.

Total oilseed production for 1985



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is estimated at 80,000 metric tons (MT), compared to 31,000 MT in 1984. Soybean production is estimated at 46,000 MT in 1985 after the 6,000 MT crop of 1984. Cottonseed production is estimated at 10,000 MT compared to 8,000 MT.

Total fats and oils production is estimated at 142,000 MT in 1985 after a 1984 production of 121,000 MT. Soybean oil is the primary oil for liquid oils and margarines. Domestic 1985 production is estimated at 40,000 MT compared to 12,000 MT in 1984. Palm, palm kernel and fish oils are used primarily in shortening. Oil palm acreage continues to grow and should reach 34,000 hectares by 1986 compared to 28,000 hectares in 1984. Palm oil production is estimated at 85,000 MT in 1985, compared to 76,000 MT in 1984. Fish oil production in 1985 is estimated at 40,000 MT compared to 34,000 MT in 1984.

Four plants have facilities to fractionate palm oil, and a USDA report says two more plants are said to be installing fractionating equipment. Palm oil has begun to be sold as a cooking oil in some areas. Palm oil growers have sought authority for exports, but Ecuador is still in a deficit situation with regard to fats and oils production and consumption.

Total oil supply for 1985 is estimated at 250,000 MT, including 142,000 MT domestic production, 58,000 MT of stocks, and 50,000 MT of imports. Usage of about 191,000 MT will leave 49,000 MT of stocks for 1986. Total 1986 supplies are forecast at 249,000 MT, including 155,000 MT domestic production and 40,000 MT of imports.

Egypt

Egypt continues as a net importer of fats and oils as its domestic cottonseed supply falls and soybean crushing capacity is idled by lack of imports.

Egypt's farmers find it more profitable to grow vegetable crops than cotton. Cottonseed production was about 680,000 metric tons (MT) in

1984, is estimated at 664,000 MT in 1985 and forecast at 675,000 MT for 1986, assuming an increase in acreage. Egypt's 1985 domestic cottonseed oil production is estimated at 100,000 MT, with imports of another 175,000 MT, primarily from Brazil and the U.S. Egypt also is expected to import about 200,000 MT of sunflowerseed oil; a 50,000 MT purchase from Hungary was announced earlier this year. Soybean production and imports are about equal at roughly 150,000 MT each, with soybean oil production about 57,000 MT.

A USDA report says about 200,000 MT of soybean crushing capacity is idle for lack of imports to process. A bulk oil facility was completed during the past year in Alexandria, providing a smooth import pipeline. Plans have been announced for a palm oil processing facility in a duty-free zone.

Total domestic production of oils for 1984 was about 162,000 MT. It is estimated at 163,000 MT for 1985 and forecast to be 182,000 MT in 1986. Imports for the same years: 379,000 MT, 435,000 MT and 470,000 MT.

Rapeseed producing nations are seeking to open Egyptian markets to their oils; technical expertise is needed if more use is to be made of soybean, cottonseed and sunflower oils.

France

French rapeseed acreage is expected to increase for the 1985/86 marketing year, but the domestic production may drop to 1.1 million metric tons (MT) from 1.3 million MT because of lower yields.

Even so, rapeseed crushings are expected to remain at about 700,000 MT. Rapeseed crushers were handling British rapeseed last year despite record domestic harvests because of currency differentials within the EEC. The end result is relatively low stocks of rapeseed from last year's harvest.

Sunflower acreage, at 580,000 hectares, should surpass that of rapeseed. Sunflowerseed production is estimated at 1.210 million MT, which would be

the first time the harvest has topped one million tons.

Rapeseed oil production is estimated at 273,000 MT with total supplies of 321,000 MT. About 270,000 MT are expected to be exported. Sunflower oil production for 1985/86 is estimated at 190,000 MT with some 170,000 MT more being imported. About 313,000 MT will be consumed as food domestically and 45,000 MT exported.

Soybean acreage is expected to be about 35,000 hectares, up 60% from the previous year, spurred primarily by a relatively high EEC price for soybeans, according to a USDA report. Production will be about 70,000 MT, with soybean imports expected to be relatively constant at 590,000 MT. Soybean oil production will be about 100,000 MT, approximately equivalent to soybean oil exports. France also imports about 80,000 MT of soybean oil annually.

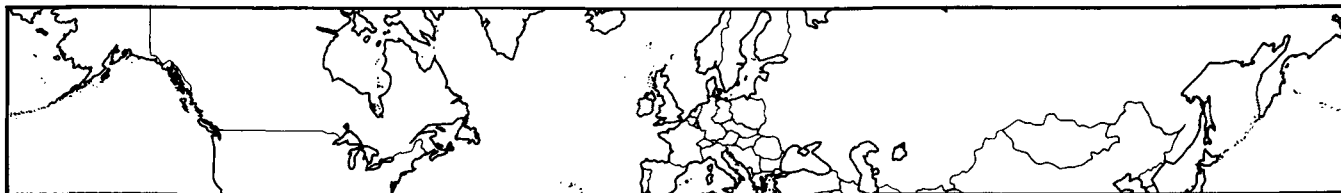
A Belgian firm, Vamo-Mills, has proposed construction of an oilseed crushing plant in Southern France in the Languedoc-Roussillon area, to handle about 400,000 MT a year. The seaport facility would handle sunflowerseed, rapeseed and imported soybeans. While the region now produces 250,000 MT of oilseed a year, the main agricultural product now is wine.

Federal Republic of Germany

West Germany's Oelmuehle Hamburg oilseed mill has resumed crushing and eventually will have a capacity of about 1.3 million metric tons (MT).

The net addition to West German crushing capacity should be about half a million tons annually, as the 350,000 MT Hamburg Hobum Mill has closed. Estimated German crush of soybeans, rapeseed, sunflower, flaxseed and copra for 1985 is 4.7 million MT. Virtually all oilseeds are imported

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except for about 700,000 MT of domestic rapeseed.

Rapeseed acreage has expanded in recent years from 236,000 hectares in 1984 to an estimated 255,000 in 1985 and an expected 278,000 for 1986. Production has increased from about 600,000 MT for 1984 to an expected 710,000 MT for 1986.

Germany's most abundant oil is soybean oil, with production of 485,000 MT from imported soybeans expected for 1986. Exports for 1985 are expected to be about 250,000 MT and domestic use about 435,000 MT. Imports provide the balance.

Rapeseed oil production is expected to be about 500,000 MT plus 50,000 MT imports, with 310,000 MT for exports and 240,000 MT for domestic use; sunflower oil production is expected to be 175,000 MT plus 195,000 MT imports, with 100,000 MT for export and 230,000 MT for domestic use. Domestic palm oil usage of 150,000 MT is provided through imports; fish oil usage of about 200,000 MT comes mainly from imports as well.

German Democratic Republic

East German rapeseed production is expected to be about 280,000 metric tons (MT) for the 1985 harvest, up from the previous year's 261,000 MT, but still below a goal of 360,000 MT annually.

Rapeseed oil represents about 50% of total oil production, sunflower oil about 20%, tropical oils and fats about 17% and soy oil, 13%. While rapeseed oil is produced from a domestic crop, sunflower oil is either imported as oil or produced from imported sunflowerseed.

A USDA report says East Germany's oil imports are dropping because of a stable population with declining per capita consumption and increasing domestic fats and oils production. Oil-

seed imports have risen to fully use processing facilities and to provide meal for animal rations.

Greece

Poor growing conditions caught Greece's olive oil crop in an "off" year during 1984, cutting production nearly 30%, sending prices higher and leading to a ban on exports.

Production for 1984 had been forecast at more than 300,000 metric tons (MT), following a crop of about 397,000 MT, but fell to 283,000 MT. The next harvest will be in the "on" year of the alternating cycle and is expected to produce a crop of more than 300,000 MT again.

Government restrictions on soybean oil sales are scheduled to end as of Jan. 1, 1986. If the restrictions are not extended, soybean oil will be on a free market basis.

Guatemala

Guatemala's edible oil needs continue to be met primarily through imports as cottonseed production continues at depressed levels and efforts to establish oil palm and soybean acreages are in early stages.

Only recently, announcements were made of an effort to buy 8,900 metric tons (MT) of oil from the U.S. under special financing arrangements. That's equivalent to about 80% of Guatemala's cottonseed oil output for 1985, estimated at 11,000 MT.

Plans also have been announced for 6,000 hectares of oil palm and, eventually, a mill to process oil palm. All current oil palm production is sold to a soap factory. A recently formed soybean producers' association hopes to increase soy acreage and also eventually establish a facility for processing the crop. All soybeans grown currently are processed as full-fat meal for poultry operations.

Cotton acreage in Guatemala is about one-third of the 1978 acreage; installed crushing capacity, designed mainly for soybean, is being used at less than 25% capacity.

Hungary

Hungarian oilseed production is expected to reach 800,000 metric tons (MT) during 1985, with sunflower at 642,000 MT the largest crop. The 1985 production is about 10% above the previous year, due primarily to increased acreage.

Hungary crushes about 85% of its sunflower crop and exports about 13%. Almost all the rapeseed crop, about 100,000 MT, and the soybean crop, about 60,000 MT, are crushed, with the soybeans shipped to neighboring Yugoslavia for processing and the oil and meal returned to Hungary.

Sunflower will be the source of about 231,000 MT of Hungary's 281,000 MT of vegetable oil expected to be produced in 1985. About 190,000 MT are exported, including approximately 171,000 MT of sunflower oil. Egypt is the newest trading partner for Hungary's sunflower oil.

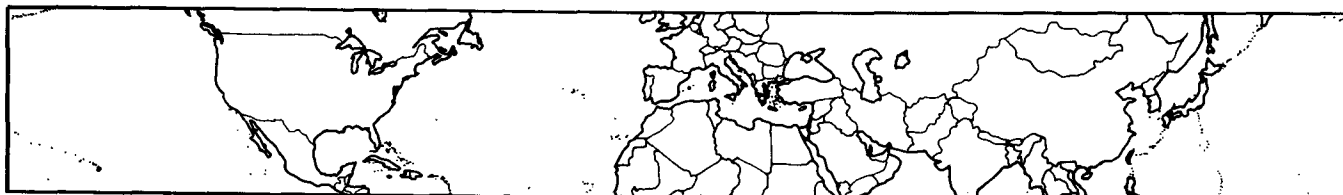
India

India's domestic consumption of edible oil continues to climb upward from 4,568,000 metric tons (MT) in 1984 to an estimated 4,693,000 MT in 1985 and a forecast 4,742,000 MT in 1986.

Domestic oil production also is rising, but imports continue to be over 1.25 million MT of oil a year. For 1984, oil production was about 3.4 million MT, with 1.7 million MT imported; for 1985, production is estimated at 3.7 million MT with 1.3 million MT imports; for 1986 the forecast is production of 3.6 million MT and imports of 1.4 million MT. Imports for 1984 were higher than normal as the government sought to keep prices under control during an election year.

Peanut is India's major domestic oil crop. Peanut oil production is estimated at 1.6 million MT, 1.5 million MT and 1.6 million MT for 1984, 1985 and 1986, respectively. Rapeseed oil is the No. 2 domestic oil crop, with

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production estimated at 671,000 MT, 969,000 MT and 810,000 MT for 1984, 1985 and 1986, respectively. The government is encouraging production of soybean and sunflower, with total oil supplies domestically produced from those two crops rising from about 180,000 MT in 1984 to a forecast 267,000 MT in 1986.

Soybean oil and palm oil are the major imported oils. In 1984, about 810,000 MT of soybean oil and 550,000 MT of palm oil were imported; in 1985, 450,000 MT soy and 700,000 MT palm were imported. Estimated imports for 1986 are 600,000 MT of soy oil and 600,000 MT of palm oil. Price is the major factor in India's oil import purchases.

India's meal exports have dropped below the one million MT level because of increased competition from other nations and problems with aflatoxin levels in peanut meal.

There is surplus crushing capacity in India, but the government does not permit oilseed imports, believing it is more economical to import oils. The prohibition also is designed to encourage domestic oilseed production.

Indonesia

Indonesia's crude palm oil production surpassed one million metric tons for the first time in 1984, is estimated at 1.1 million metric tons (MT) for 1985 and forecast at 1.3 million MT for 1986.

Palm oil and coconut oil are the major edible oils. Consumption of palm oil was about 930,000 MT in 1984 and is expected to rise to 1.05 million MT in 1986. Coconut oil consumption figures for 1984 and 1986 are 618,000 MT and 720,000 MT, respectively. Crude palm oil exports are limited to 10% of production.

Indonesia is vigorously encouraging palm oil production, hoping eventually to rival Malaysia in world markets.

Indonesia's first soybean crushing facility, a 1,000 MT a day plant, is now projected for completion in late

1986. While domestically grown soybeans now are used primarily as food (soybean curd products, tempeh), about 210,000 MT to 220,000 MT a year of soybean meal is imported for feedstuffs. Small-scale producers are adopting soybeans quickly as a second crop and staggered planting dates reduce the potential problem of storing beans. Soybean production that was 626,000 MT in 1984 is expected to reach 825,000 MT by 1986. Imports in 1984 were 400,000 MT and are forecast at 366,000 MT by 1986.

Israel

Cottonseed is Israel's principal domestic oilseed crop, while soybean oil crushed from imported beans provides the major edible oil.

Cottonseed production in 1985 and 1986 is expected to remain about 190,000 metric tons (MT), despite an acreage increase. Lack of irrigation water and weather are responsible for the decline in yield. Most of the crop has been fed directly to cattle, but in 1984 the ratio changed with about half being crushed. Oilmill operators for a cooperative apparently have shown that crushing into oil and meal provide more economic value than direct feeding.

Total vegetable oil supplies for 1985 are estimated at 116,000 MT, including about 88,000 MT of soybean oil and 16,000 MT of cottonseed oil. During the past year, a subsidy for soybean oil was eliminated, narrowing the price spread and perhaps helping cottonseed oil sales.

Italy

A mid-January freeze affecting about 25% of Italy's olive-growing area reduced olive oil production. All of northern Italy and some other areas are fearing a total loss of the 1985 crop. Estimated olive oil production for 1985 is about 400,000 metric tons (MT), supposedly an "on" year in the olive crop's alternate on-off biennial cycle. The previous "on" year pro-

duced about 825,000 MT and the intervening "off" year produced about 390,000 MT.

Total oil output from domestic crops, other than olive, was about 430,000 MT in 1984, down slightly from 1983. Soybean oil, produced largely from imported soybeans, is the largest oilseed oil used in Italy, with about 250,000 MT expected to be used in food products in 1985. Domestic soybean production has risen from 62,000 MT in 1984 to a forecast of 230,000 MT for 1986. Imports also are rising to meet demand. Surplus soybean oil stocks from 1983/84 were exported last year as world prices rose.

Domestic consumption of sunflower oil was about 69,000 MT for 1984; it is estimated at 78,000 MT for 1985 and forecast at 86,000 MT for 1986. Sunflower oil seems to be supplanting peanut oil. Prices for peanut oil have been rising. The largest crushing and bottling facility for peanut oil was sold earlier this year to a margarine distributor, according to a USDA report.

Italian consumers reportedly also are turning away from blended vegetable oils, a trend that may slow the rate of increased use of rapeseed oil. Domestic food consumption is estimated at 60,000 MT for 1985 and forecast to rise to 65,000 MT for 1986. Rapeseed was used in many blends and continues to be an important oil for caterers and for institutional food service.

In June, an Italian newspaper reported the Ferruzzi Group of Ravenna had purchased Sio, an oilseed crushing company. Ferruzzio reportedly now controls about 70% of Italy's oilseed crushing capacity, the rest being handled by ICIC, affiliated with Continental Grain. Ferruzzio reportedly produces some retail products, but markets most of its output in bulk to bottlers.

Ivory Coast

The Ivory Coast is encouraging production of oil-bearing materials, par-



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ticularly oil palm, cottonseed and peanuts.

Palm oil is the dominant edible oil, but the increasing difficulty of harvesting older, larger trees has resulted in reductions of acreage harvested. The government is helping finance replanting and plans, within 15 years, to have replanted nearly 100,000 hectares, about equivalent to current plantation acreage. Despite the problems, the oilseed research institute reports 1985 yields were 4,100 fresh fruit bunch kilograms per hectare compared to 2,160 kg/hectare in 1955. A 1984 drought has curbed yields, and improved rainfall is expected to boost yields in 1986.

A new cottonseed processing facility is being discussed with completion scheduled in three years. Production in 1984 was 79,000 metric tons (MT). It is estimated at 96,000 MT for 1985 and forecast at 105,000 MT for 1986. Government incentives to farmers are boosting production. At the same time, the government is hoping to improve producer efficiency to increase peanut production to where 15,000 MT annually of peanut oil can be produced. Peanuts now are consumed at the village level or sold for personal consumption in large cities.

Japan

Japan's oilseed imports and processing activity have been relatively stable recently owing in part to a slow growth in oil consumption and large stocks of soybean meal.

The only domestic vegetable oil in Japan is rice bran oil, whose production in 1984 was about 88,000 metric tons (MT) out of a total oil production of nearly two million MT.

Soybean and rapeseed are the two major oilseed imports, providing 4.7 million MT and 1.25 million MT, respectively, of the 6.32 million MT of oilseeds imported during 1984. During that year, Japan used about 830,000 MT of soybeans for food products, including 480,000 MT in tofu and 182,000 MT in miso. Soy milk beverages

used about 12,000 MT in 1984, but this is estimated to fall to 10,000 MT in 1985 as new beverages—bottled tea and mineral water—have caught hold in the market.

Japan is expected to crush a total of 4.0 million MT of soybeans in 1985, producing 710,000 MT of soy oil, about 690,000 MT of which will be used in food products. Those figures are expected to remain relatively stable during 1986. The rapeseed crush for 1985 should yield 497,000 MT of oil and imported rapeseed another 23,000 MT, permitting use of about 510,000 MT in food, especially salad dressings.

Japan's crushers reportedly are upset with quality of the 1984 crop soybeans from the U.S. and also by announced plans to modify soybean standards in the U.S. A USDA report says they are looking at the possibility of buying a larger proportion of soybeans from other nations. The U.S. for 1984/85 will supply about 88% of Japan's soybean imports with China the next largest supplier, followed by Brazil.

A surplus of meal has led to speculation Japan might try to import more oil. A USDA report says the size and influence of the crushing industry make significant increases in oil imports unlikely. Total edible oil consumption is estimated at 1.55 million MT for 1984 and 1.56 million MT for 1986.

Annual production of processed oil products for 1984 was approximately: 198,379 MT mayonnaise; 159,378 MT margarine for industrial use; 147,667 MT shortening; 92,287 MT household margarine, and 45,347 MT salad dressings.

Jordan

Jordan, whose major oil crop is olives, has built a vegetable oil refinery to process imported crude soybean oil, palm oil and possibly corn oil. Production from the plant was expected to start reaching stores the second quarter of 1985.

Initial plant capacity is reported as 75 tons per day, with the possibility of later expansion to 100 tons per day. The plant is operated by the Universal Modern Industries Company, capitalized at US \$10 million. It is located in the Zarka Free Zone area. End products include edible oil, ghee substitute, shortenings and margarines.

Korea

Per capita consumption of fats and oils in Korea leveled off at 10.1 kilograms during 1984, for the first time in at least 10 years. Per capita consumption was 4.2 kilograms a person in 1975 and has climbed steadily.

Increasing population, however, meant an increase in total fats and oils consumption to 421,000 MT in 1984 from 404,000 MT in 1983. Vegetable oil consumption for those years was 260,000 MT and 251,000 MT, respectively. Soybean oil remains the dominant edible oil, with 106,000 MT consumed in 1984 and a forecast of 112,000 MT consumption in 1985. Palm oil imports have increased in recent years with 49,000 MT used in food products during 1984 and 67,000 MT expected to be used in 1985, possibly rising to 75,000 MT in 1986.

Trade balances are cited by the government as reasons for seeking to curb all imports, including those of oilseeds and related products, in part to support domestic production. Imports of tallow and palm oil for industrial use are handled through a non-agricultural ministry. About 103,000 MT of palm oil and 138,000 MT of tallow were imported in 1983; comparable figures for 1984 were approximately 65,000 MT and 175,000 MT, respectively.

Malaysia

Malaysian palm oil production reached a record 3.7 million metric tons (MT) during 1984 and could top 3.9 million MT in 1985, according to a USDA report from Malaysia.



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The continuing trend will be to increased production, the report said. A government-sponsored palm oil organization, FELDA, has announced plans to open new land during the next five years at the rate of 40,000 hectares annually rather than the previous goal of 28,000 hectares annually. Privately owned estates, once primarily rubber plantations, reportedly are removing rubber trees and replanting in oil palm, in part because they are not allowed to buy additional acreage.

Forecasts for palm oil production by the end of the century vary from about 6.6 million MT to 12.0 million metric tons. Malaysia's palm oil exports are expected to increase at an annual rate of 200,000 to 400,000 MT for the next decade. Major markets include Singapore (usually for transshipment), India, Pakistan, Japan, the Soviet Union and the U.S. Malaysia has sent trade missions this past year to India, Iran, Pakistan, China, France, Japan, East Germany, Turkey, Yugoslavia and Kuwait. Plans for a 50,000 to 60,000 MT palm oil refinery in Egypt have been announced.

About 80% of Malaysian palm oil is exported, about 5% goes into non-edible uses and 4% is used domestically for food. Domestic per capita consumption of palm oil is about 20 kilograms annually.

Malaysian coconut production was boosted last year by higher international prices and plans to intercrop coconut with cocoa. One report said some farmers earned more from the intercropping plan than they would have with oil palm plantings.

There is continuing discussion on the long-term effect of introducing weevils to oil palm plantations. Use of the weevils reduced the need for labor-intensive hand pollinating of oil palm and apparently has increased the number of kernels and larger fresh fruit bunches, but may have reduced the number of fresh fruit bunches a tree produces. Based on straight-line projections of acreage and yields from years before the weevil was intro-

duced, the 1985 harvest could have reached more than 4.0 million MT without the weevil.

During 1984, Malaysian palm oil mills operated at an average 60% of capacity. There are 266 approved mills, 243 in peninsular Malaysia. About three dozen of the 54 licensed refineries operated in 1984. Total practical capacity is about 4.6 million MT.

A published report early this summer said the World Bank was providing a \$31.2 million (US) loan to cover half the cost of construction of seven oil mills, plus providing FELDA with a computerized data system. The project is expected to take three years to complete, processing fresh fruit bunch from about 53,000 hectares.

Mexico

Mexico's 1984/85 oilseed production rose to about 1.2 million metric tons (MT), and oilseed imports for the same period rose to a record 2.3 million MT.

Imports for 1985/86 may fall because of large stocks, but there will be a change in purchasing format in that processors may now import oilseeds directly, rather than using what a government agency imports.

Soybean and sunflower oil continue to meet about 75% of Mexican oil needs. Soybean production for 1986 is forecast to rebound to the 1984 level of 600,000 MT, with an additional 1.5 million MT being imported. Soybean oil production is estimated at 360,000 MT for 1985 and forecast at 375,000 MT for 1986. Soybean oil consumption leveled off in 1985 due to consumers having less buying power, but is expected to rise again in 1986. Virtually all sunflowerseed is imported. Production in 1985 is estimated at 15,000 MT. That production, plus about 625,000 MT of imports, will be crushed to produce approximately 212,000 MT of oil. Oil production for 1986 is forecast at 240,000 MT.

The higher level of oilseed imports should mean Mexico imports less oil during 1986. Present estimates for 1986 show beginning oil stocks of

112,000 MT and new production of 793,000 MT, with about 70,000 MT of oil imports (virtually all soybean oil and sunflower oil).

Cottonseed oil production and use rose about 22% in 1985, with food usage at 70,000 MT. Safflower oil usage dropped to 44,000 MT in 1985 from 56,000 MT in 1984, reflecting reduced oilseed production. Coconut oil production fell to 64,000 MT in 1985 from 71,000 MT in 1984, with virtually all production going into personal care products.

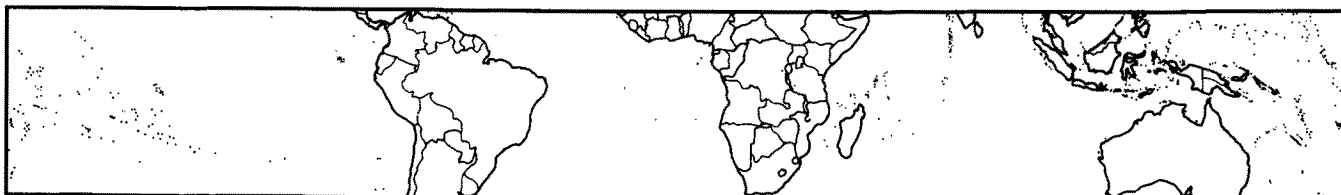
The Netherlands

The Netherlands was the only EC member nation that showed an increase in soybean crushings for 1984 over 1983, contributing to a record crushing of 3.19 million metric tons (MT) of oilseeds in 1984; the total for 1985 is expected to be about 3.17 million MT and for 1986 about 3.14 million MT.

The decline will be primarily in soybeans. The 1984 crush was stimulated by strong demand and high prices for soybean oil, with the Dutch importing high-oil varieties. But prices have weakened for 1985, and competition from other oil has increased. Soybean crushings that were 2.7 million MT in 1984 are expected to fall to 2.6 million MT by 1986. Soybean meal consumption in 1985 may be affected by an expected large grain harvest in the EC which might provide cheaper feed grains than in the past two years.

Sunflowerseed crushings in 1985 are estimated at 250,000 MT and may rise to 270,000 MT in 1986. France and the U.S. are major sunflowerseed suppliers to The Netherlands.

Fats and oils supplies are expected to remain relatively stable. About 695,000 MT are produced each year with imports raising total annual supplies to about 1.6 million MT for 1984, 1985 and 1986. Domestic food consumption of oils is forecast at 349,000 MT, 340,000 MT and 350,000 MT for 1984, 1985 and 1986, respectively. Soybean oil is the major



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food oil, supplying about 130,000 MT annually, followed by fish oil at 80,000 MT annually, rapeseed oil at 60,000 MT annually and palm oil, about 35,000 MT annually. Coconut, palm kernel and coconut oils also are used for food products.

Peanut imports into The Netherlands reached an all-time high of 125,000 MT in 1984, a figure expected to rise to 130,000 MT by 1986. Peanuts are used in confectionery products and peanut butter, not for crushing into oil and meal.

Future oilseed market developments are largely dependent on EC decisions affecting subsidies to farmers, crushers and others that can affect prices for oilseeds and products, as well as competing feedstuffs and foodstuffs.

Nigeria

Nigerian peanut production, limited by drought to 400,000 metric tons (MT) in 1984, is expected to reach 570,000 MT in 1985 and forecast at 700,000 MT in 1986, according to a USDA report.

Rainfall rose about 33% to 27.6 inches for 1984/85, with rain more evenly distributed and more timely in the crop growing cycles. Improved rainfall is expected to boost soybean production from 50,000 MT in 1984 to 68,000 MT by 1986; cottonseed production is forecast to rise from 27,000 MT in 1984 to 42,000 MT in 1986.

Palm oil is the dominant food oil in Nigeria and was less affected by the drought. Production was 540,000 MT in 1984, estimated at 550,000 MT for 1985 and forecast at 555,000 MT for 1986. Economic considerations are constraining increased investment in oil palm plantings, with total area relatively stable at 2.2 million hectares; about half a million hectares are in plantations and the rest in scattered wild stands.

Production of other vegetable oils expected in 1985 (with 1984 production in parentheses): peanut, 146,000

MT (98,000 MT); palm kernel, 85,000 MT (80,000 MT), and cottonseed, 3,000 MT (3,000 MT). Rapeseed oil imports for 1985 are expected to fall to 65,000 MT from 1984's 80,000 MT, reflecting the improvement in domestic oil production. Similarly, 1985 soybean oil imports are estimated at 60,000 MT compared to 1984's 70,000 MT. Domestic soybean crushing, virtually nonexistent in 1984 and 1985, is expected to total 25,000 MT in 1986, yielding about 4,000 MT of domestic soybean oil.

Paraguay

Paraguay's oilseed production set new records in 1985, spurred by favorable weather, good seed and economic incentive.

Total oilseed production for 1985 is estimated at 1.02 million metric tons (MT) including a record 750,000 MT of soybeans and a record 240,000 MT of cottonseed. Soybean production in 1986 may climb another 50,000 MT.

Most soybeans are exported, with 1985 exports estimated at 625,000 MT. Cottonseed provides the major domestic edible oil with a crush of about 230,000 MT in 1985 expected to produce about 37,000 MT of oil, about 18,000 MT of which should be exported.

Domestic oil consumption is about 39,000 MT, including 19,000 MT of cottonseed oil, 14,000 MT of soybean oil and about 6,000 MT of peanut oil. Most oil is consumed as a table or liquid blended oil.

Pakistan

Pakistan's edible oil production during 1985 rose to 272,000 MT, up about 84,000 MT, but the nation remains one of the world's major oil importers with 1985 volume estimated at 680,000 MT.

Improved growing conditions for cotton spurred an increase in cotton-

seed production to 1.94 million MT in 1985 compared to 1.02 million MT in 1984. The improved production is expected to continue through 1986. Domestic cottonseed oil production for 1985 is estimated at 198,000 MT compared to 126,000 MT in 1984. Rapeseed and mustardseed provide the second largest domestic source of oils, with about 70,000 MT produced in 1985. Imported palm and soybean oils are the other major edible oils. Palm oil imports are estimated at 350,000 MT for 1985 and 430,000 MT for 1986, respectively.

Edible oil consumption rose about 4.5% in 1985, a USDA report said, because of increased over-all population generally and urban population specifically. Per capita edible oil availability was about 9.34 kgs for 1985.

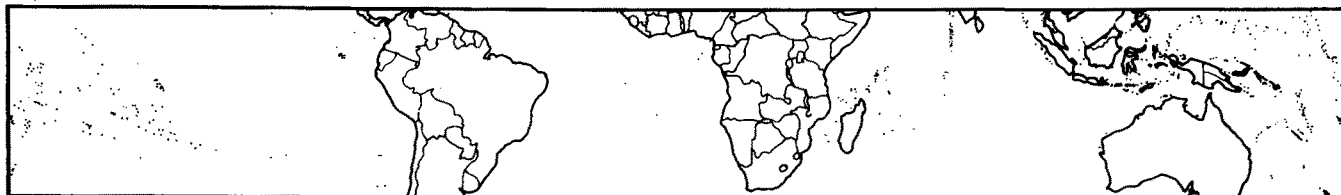
Government incentives to increase oilseed, and thus oil, production are aimed primarily at encouraging new crops. New low-erucic, low-glucosinolate rapeseed varieties are being introduced, but are not expected to catch on with producers for another five years. Pakistan is expected to remain a major oil importer at least for another decade.

Peru

A dramatic reversal in fish catch was primarily responsible for an increase in Peru's 1984 edible oil production to 173,000 metric tons (MT) from the 1983 level of 28,000 MT.

Fish oil production rose 6,000 MT in 1983 to 145,000 MT in 1984 and is estimated at 150,000 MT for 1985. Cottonseed oil production rose from 12,000 MT in 1983 to 19,000 MT in 1984 and is estimated at 25,000 MT for 1985. Soybean imports have dropped from 97,000 MT in 1983 to 50,000 MT for 1984 and are estimated at 40,000 MT for 1985.

Declining consumer purchasing power is curbing use of vegetable oils and any products derived from meal, especially poultry, a USDA report said.



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The Philippines

The Philippine Coconut Authority may take more coconut oil mills out of production this year because of overcapacity, according to a report from the USDA.

Total copra crushing capacity is estimated at 3.5 million metric tons (MT) with annual copra production running about 2 million MT. Oil refining capacity is estimated at one million MT. Fourteen crushing plants and refineries closed in 1979 are expected to remain closed.

Copra production in 1984 was about 1.3 million MT, apparently reduced by 1983 drought conditions. In 1984, production recovered to an estimated 1.7 million MT; improving conditions have led to a 1986 forecast of 1.92 million MT.

Coconut oil production was 886,000 MT in 1984, is estimated at 1.08 million MT for 1985 and forecast at 1.2 million MT for 1986. About 900,000 MT of coconut oil are expected to be exported in 1986. Domestic use of coconut oil for industrial purposes is expected to grow from 33,000 MT in 1984 to 73,000 MT in 1985 and a forecast of 105,000 MT in 1986. The sudden increase is a result of the opening of Unichem's new oleochemicals plant (JAOCs 62:668, April 1985) and its reaching rated capacity of 70,000 MT of crude coconut oil a year.

Domestic edible coconut oil consumption is estimated at 202,000 MT for 1985 and 1986, up from 1984's 176,000 MT usage, partially because increasing supplies should mean lower consumer prices.

Poland

Poland's unexpectedly large 1984 rapeseed harvest forced crushing plants to operate three shifts a day, seven days a week and to exceed rated capacity of approximately 700,000 MT by about 28%.

The large harvest was a result of more hectares being planted and better

yields. Production was more than 900,000 MT, compared to the previous year's 550,000+ MT harvest.

Price incentives were not as high for the 1985 harvest, so production is expected to be lower and the workload on crushing plants therefore lighter. Even so, government plants reportedly call for crushing capacity of one million tons by the end of the decade, with infrastructure to produce 355,000 tons annually of margarine and other processed foodstuffs.

About 90% of the 1984 crop reportedly was low erucic rapeseed. About 1% of rapeseed acreage was planted to low-erucic, low-glucosinolate varieties in 1985, with acreage expected to be about 24,000 hectares, or 5% of rapeseed acreage, for 1986.

The large rapeseed harvest permitted relatively large exports of rapeseed and rapeseed products, which provided funds to buy additional soybeans and soybean products. Soymeal is rated highly for animal feed in Poland, and soy and sunflower oils quickly disappear from store shelves when they are available.

South Africa

After three years of drought, South Africa's weather has changed and oilseed production is up 67% or more from drought levels of 1983.

Total oilseed production in 1983 was about 355,000 metric tons (MT), but it rose to 593,000 MT for 1985 and is forecast to reach 740,000 MT in 1986 as acreage is increased.

The two major domestic oilseeds in terms of volume are sunflower and peanuts. Sunflowerseed production has risen from 180,000 MT in 1984 to an estimated 306,000 MT in 1985 and a forecast 335,000 MT for 1986. Peanut production (in shell basis) figures for the same years are: 72,000 MT, 166,000 MT and 275,000 MT, respectively. The improved harvests mean South Africa again is a net exporter of oilseed rather than a net importer.

Total oil production for 1985 is estimated at 208,000 MT, up from 1984's

125,000 MT. The forecast for 1986 production is 243,000 MT. Vegetable oil imports for 1984, 1985 and 1986 are 128,000 MT, 60,000 MT and 43,000 MT, respectively.

Soviet Union

A poor oilseed harvest in 1984 may mean 1985 vegetable oil imports rise 15%, according to a report from the USDA.

Total oilseed production for 1984 is estimated at 9.9 million metric tons (MT), compared to 10.9 million MT in 1983. The 1984 total includes estimates of 4.5 million MT of sunflowerseed, 4.6 million MT of cottonseed, 425,000 MT of soybeans and 175,000 MT of flaxseed, with less than 70,000 MT each of mustardseed, rapeseed and castor bean. The 1985 forecast is for a total production of 11.4 million MT, including 5.3 million MT of flaxseed, 95,000 MT of rapeseed, 90,000 MT of mustardseed and about 65,000 MT of castor bean. Harvested acreages for sunflower, soybean and rapeseed are expected to increase in 1985.

Total vegetable oil production for 1985 is forecast at 2.85 million MT, up from 1984's 2.67 million MT. As a result, 1985 vegetable oil imports may reach 820,000 MT, compared to 710,000 MT in 1984. The forecast estimate for 1985 includes 250,000 MT of palm oil and 200,000 MT each of soybean and sunflower.

Per capita consumption of vegetable oils has risen from 9.6 kilograms in 1983 to an estimated 9.7 kilograms in 1984 and a forecast 9.8 kilograms for 1985. A goal of 13.2 kilograms per person annually by 1990, set several years ago, appears virtually unreachable.

Soviet crushing capacity is estimated at 12 million MT annually, or about 43,230 tons a day, perhaps higher, as the goal for current five-year plan (1981-85) was to add total capacity of 4,200 tons a day. Approximately 21,000 tons a day is for sunflower extraction, 20,000 tons a day for cottonseed, and the rest for soybeans and other crops.



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Spain

Spain is expected to become a member of the EEC sometime in early 1986, but agreement is still being sought on how oilseeds and products will be affected.

The EEC is considering various changes in its agricultural policy toward fats and oils.

A strong dollar, reduced demand for soy meal and reduced market for soy oils led to a 19% drop in soybean crushing during 1984/85, to 2.1 million metric tons (MT). That total may not change much in 1985/86, when total oilseed crushings are expected to reach around 3.1 million MT.

Spain harvested record olive and sunflowerseed crops in 1984/85, resulting in edible oil consumption and exports being about equal at 700,000 MT each, with olive oil exports rising. Initial acreage information and good weather indicate a slight increase in oilseed production for 1985/86. Oilseed imports for 1984/85 were about 2.1 million MT, a drop of 20%. Sunflowerseed production was 970,000 MT for 1985, compared to 750,000 MT in 1984.

Sri Lanka

Copra production in 1985 is expected to rebound to approximately 150,000 metric tons (MT) from 1984's drought-reduced crop of 62,000 MT. Production may rise further in 1986.

About two-thirds of Sri Lanka's coconut crop is harvested, which means copra production is based on the other one-third. About 10% of the crop is used to produce dessicated coconut, one of Sri Lanka's major exports.

Domestic coconut oil production is mainly from expellers, with the two solvent extraction plants (a third is planned) processing mainly rice bran. Per capita annual consumption of coconut oil is about 3 kilograms, but since most Sri Lankans consume about 90 fresh coconuts a year, total per capita availability of fat is about 16 kilograms a year. Coconut oil production in 1985

is estimated at 90,000 MT, with about 35,000 MT expected to be exported. The totals for 1984 were 37,000 MT in production and 12,000 MT in exports.

The new solvent extraction facility is planned for Anuadhapuram.

Sweden

Swedish rapeseed production is expected to be relatively stable for 1985 at 332,000 metric tons (MT), but the major development is the rapid switch-over to low-erucic acid, low-glucosinolate varieties of rapeseed and spring turnip.

While 1984 double-zero varieties accounted for about 10% of Swedish oilseed production, by 1990 virtually all oilseed production may be double-zero varieties.

Swedish edible oil consumption is forecast at about 120,000 MT for 1985, including about 62,000 MT of imported soybean oil and 40,000 MT of domestic rapeseed oil. The rest is fish oil and cottonseed oil. Sweden expects to export about 51,000 MT of rapeseed oil during 1985.

Syria

Unsuitable weather reduced production of olives and of cottonseed, Syria's major domestic oil crops, during 1984.

Total 1984 olive production is estimated at 340,000 metric tons (MT), compared to more than 450,000 MT during the 1982 "on" year of the alternate crop years. Lack of rain and a fungal infection cut production.

The 1984 cottonseed crop produced 280,000 tons, down from the previous season's record 330,000 MT. The 1986 crop is forecast at 306,000 MT. Cottonseed oil production is estimated at 37,000 MT for 1985. Olive oil production for 1985 is expected to be 72,000 MT. Total oil consumption for 1985 is estimated at 131,700 MT, including about 12,000 MT of imported soybean oil, plus sesame oil, sunflower oil and corn oil.

Turkey

Turkish oilseed production rose in 1984/85 to 1.75 million metric tons (MT) from the previous season's 1.66 million MT, but it is expected to decline again for 1985/86 to 1.74 million MT.

Less cottonseed acreage, triggered by lower prices, will account for the decline. Cottonseed is a major oilseed in Turkey with 927,000 MT produced in 1984/85 and a forecast for 815,000 MT for 1985/86. The other major oilseed produced is sunflowerseed, which is expected to rise from 650,000 MT in 1984/85 to 730,000 MT in 1985/86.

Total domestic edible oil production for 1984/85 is estimated at 503,000 MT, including 80,000 MT of olive oil, 260,000 MT of sunflower oil and 131,000 MT of cottonseed oil. For 1985/86, the forecast is for domestic production of 509,000 MT of edible oil, including 60,000 MT of olive oil, 300,000 MT of sunflower oil and 114,000 MT of cottonseed. To meet 1985/86 domestic demand, Turkey is expected to import about 120,000 MT of soybean oil, 40,000 MT of sunflower oil and 10,000 MT of olive oil.

In 1984, Turkey imported 77,000 MT of soybeans from the U.S., its first such transaction.

United Kingdom

Rapeseed continued to strengthen its position in England's fats and oils industry.

Production jumped from 580,000 metric tons (MT) for the 1983/84 crop to an estimated 930,000 MT for the 1984/85 crop and may reach 950,000 MT for the 1985/86 crop, climbing steadily toward the anticipated one million MT mark within a few more years.

England's total domestic food oil consumption was 605,000 MT for 1984, is estimated at 647,000 MT for 1985 and is expected to be about 682,000 MT for 1986. Rapeseed oil's share for those three years is estimated



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at 250,000 MT, 270,000 MT and 310,000 MT, respectively. Soybean oil food usage is about 200,000 MT annually, as is fish oil food usage.

The crushing industry in England is consolidating and modernizing as rapeseed usage increases. J. Bibby and Sons, a division of Bunge, reportedly will have a new 300,000 MT rapeseed crushing plant in Liverpool in operation during 1985. Also in Liverpool, Contisoya is reported adding an oil refinery at its crushing facility, which reportedly has a crude oil production capacity of 85,000 MT.

Uruguay

Uruguay's government aims to have the nation self sufficient in wheat and soybeans within two years and, to achieve that goal, is offering loans to crop producers at interest rates below the prevailing rates and rate of inflation, according to a USDA report.

The goal of self-sufficiency in edible fats and oils is within reach as total production for 1985 is estimated at 24,000 MT and imports at 4,000 MT; for 1986, production is forecast at 26,000 MT with imports at 4,000 MT.

A new soybean/sunflower processing plant was to open in 1985 with a capacity of 25 tons a day. A rice bran, soybean and corn processing plant previously announced has been delayed for possibly two years.

Sunflowerseed production is estimated at 30,000 MT for 1985 and forecast at 50,000 MT for 1986, with imports of about 15,000 MT each year. Soybean production is forecast at 25,000 MT in 1985 and 43,000 MT for 1986. Oil production is estimated at 18,000 MT of sunflower oil and 4,000 MT of soybean oil in 1985 and forecast at 19,000 MT of sunflower oil and 4,000 MT of soybean oil for 1986. About 2,000 MT of each are expected to be imported each year.

Venezuela's oilseed production is expected to increase in 1985 and 1986 as a drought period has ended and producer prices have been increased as an incentive for increased oilseed plantings.

In 1984, only about 12% of edible oil consumption was from domestically produced oilseeds; for 1985 and 1986, that figure may climb to a more normal 20%. In 1984, Venezuela produced about 90,000 metric tons (MT) of oilseeds and imported another 115,000 MT. From that supply, about 57,000 MT of edible oil were produced; another 256,000 MT were imported. For 1985, domestic oilseed production is expected to be 126,000 MT and imports to be about 170,000 MT, yielding 78,000 MT of oil to be supplemented by 223,000 MT of imports. For 1986, the forecast is for oilseed production of 146,000 MT and imports of 150,000 MT to produce 81,000 MT of edible oil with another 233,000 MT of imports.

Increased cottonseed and sesame production are expected to pace the oilseeds sector. Government bans on textile imports have spurred cotton production. High producer prices have been approved for sesame, peanut, copra and African palm. Peanuts are used mainly as food, not for crushing; copra and palm production has not increased, although the government has said it wants to increase palm acreage.

Yugoslavia

Total oilseed production for 1985 is estimated at 600,000 metric tons (MT) from 285,000 hectares, compared to 505,000 MT from 254,000 hectares in 1984.

Total edible oil consumption was about 246,000 MT in 1984, is esti-

mated at 298,000 MT for 1985 and forecast at 192,000 MT in 1986. Most of the increase is in sunflower oil production, which was about 45,000 MT in 1984 and is expected to reach 76,000 MT by 1986. The other two major edible oils are soybean and rapeseed. Soy oil production for 1984 was about 66,000 MT; it is estimated at 71,000 MT for 1985 and forecast for 71,000 MT in 1986. Rapeseed oil production was 42,000 MT in 1984 and is estimated at approximately 45,000 MT for 1985 and 1986. Good demand for sunflower oil, as well as availability of disease-resistant sunflower varieties, is credited for the increased production.

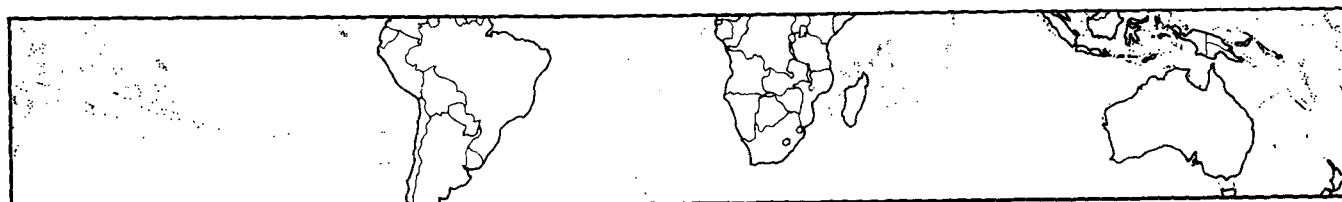
Yugoslavia has about two dozen crushing plants, with the two modern soybean plants in Zadar and Becej contributing about 500,000 MT toward the nation's annual crush capacity of about 1.2 million MT. The Zadar unit primarily crushes imported soybeans; the Becej plant crushes domestic production.

Zimbabwe

Government prices paid to peanut producers are too low to encourage the large-scale plantings of past years, so production for 1985 is estimated at 28,000 metric tons (MT) and for 1986 at 30,000 MT. At the start of the decade, peanut production was more than 100,000 MT annually.

Cottonseed is the dominant edible oil, providing an estimated 24,000 MT for 1985 and with the same amount forecast for 1986. Soybean oil production for the two years is estimated at 15,000 MT and 16,000 MT; sunflower oil production is estimated at 5,000 MT each year.

Improved rainfall is expected to increase oilseed production for 1985 and 1986. Foreign exchange shortages make oilseed or oil imports unlikely.



High oleic sun oil on the way

Sunflowerseed containing oil high in oleic acid should be "in abundant supply in the U.S. in the next year," according to consultant Richard Purdy, a speaker at AOCS' annual meeting in May.

Speaking on the physical and chemical characteristics of high oleic sunflower, Purdy said the first commercial production of sunflower high in oleic acid took place in the U.S. in 1984. That was undertaken by SVO Enterprises, a subsidiary of Lubrizol Corp. of Wickliffe, Ohio.

According to Dennis Terry of SVO Enterprises, 1.4 million pounds of high oleic sunflower oil was produced in the U.S. in 1984 on acreage planted with a genetic hybrid developed by Sigco Research of Breckenridge, Minnesota, now a subsidiary of Lubrizol. This year, SVO has contracted for the planting of 40,000 acres to this high oleic sunflower variety. Production, he said, is targeted at 20 million pounds of oil.

Sunflower varieties producing oil with high oleic acid content first were revealed by Russian scientists in the 1970s. Research in the U.S. began in the early 1980s after seed samples were obtained from the Soviets. Unlike other sunflower varieties, the fatty acid content of these high oleic lines does not appear to be dependent on growing temperatures. "With normal sunflower, there is a difference in the oleic and linoleic composition as you move north to south. With this new variety, you do not see this shift," Terry said. For 1985, SVO contracted for plantings in California, Texas and North Dakota.

According to Terry, normal varieties generally have 20-30% oleic content and 60-70% linoleic acid content. "With the high oleic, we are getting 80 to 85% oleic content and below 10% linoleic."

The chief advantage of high oleic sunflower oil is its oxidative stability. "It doesn't have to be hydrogenated," Terry said.

Purdy said studies show the high oleic sunflower crude oil has similar sterol composition to normal varieties and contains comparable essential and non-essential amino acids. The resulting meal also is comparable. The major difference, he said, is improved resistance to oxidation. Noting, "There's always a premium on a new oilseed development," Purdy added, "So the price is higher than soy oil."

Terry does not see high oleic sunflower as a competitor for normal sunflower varieties. "We see this rather as an expansion of the market for sunflowers," he said, explaining that the high oleic sunflower oil can serve as a new feedstock for processors of oleic based chemicals such as oleyl alcohol, for instance.

In addition, Terry said, once there are stable supplies, prices should stabilize as well.

The high oleic sunflower developed at Sigco was derived from genetic material from the original Pervenets variety introduced by Soviet geneticists. Other work in the U.S. on Pervenets variety seed has been conducted by USDA's Agricultural Research Service in cooperation with North Dakota State University. The result there has been development of a high oleic sunflower synthetic, ND-01, from which high oleic hybrids can be derived.

According to J.F. Miller, research geneticist, and B.A. Vick, research chemist, with the USDA Agricultural Research Station stationed at North Dakota State University,

high oleic sunflower oil has certain advantages as a frying oil. One is that the oil can be heated to a higher temperature without smoking, so food is cooked faster and less food impurities enter the oil. Also, the longevity of the oil is increased, both in storage and while heated.

Supplies of germplasm seed of the ND-01 high oleic acid synthetic are maintained by the Seedstocks Project, Agronomy Department, North Dakota State University, Fargo, North Dakota. Quantities of the synthetic are distributed to researchers on request.

U.S. oilseed exports falling

U.S. oilseed exports are projected to value \$6.8 billion during fiscal year 1985, almost \$2 billion below the previous fiscal year, according to a USDA forecast issued at the end of May. USDA attributed the reductions to slow growth in foreign livestock production and large foreign oilseed production.

During fiscal 1984, the U.S. exported \$8.774 billion worth of oilseeds and products. Volumes exported included 19.3 million metric tons (MT) of soybeans, 4.9 million MT of soybean cake and meal, 828,000 MT of soybean oil, 995,000 MT of sunflowerseed, 188,000 MT of sunflowerseed oil and 198,000 MT of other oilcakes and meals.

USDA projections for fiscal 1985 list a total value of \$6.8 billion for oilseeds and products. Projected volume includes 18.6 million MT of soybeans, 4.4 million MT of soybean cake and meal, 700,000 MT of soybean oil, 1 million MT of sunflowerseed, 100,000 MT of sunflowerseed oil and 100,000 MT of other oilseeds and meals.

Summarizing export projections for various parts of the world, USDA forecast that U.S. soybean exports to Western Europe may fall one-third below the 1980-1984 average volume. U.S. soybean meal shipments to the EEC through March were 50% lower than a year earlier.

Soybean exports to Japan are not expected to exceed 1984's 4.2 million tons, USDA said, explaining that compound feed production will grow slowly and substitution of fish and rapeseed meal has kept soybean meal stocks high. Also, South American competition is expected to be strong.

Higher soybean meal exports to Canada are likely because of increased Canadian poultry production, and soybean oil exports may also rise but soybean exports could fall more than 10%, USDA said.

U.S. soybean exports to Russia and Eastern Europe also are expected to decline. In South Asia, imports of U.S. vegetable oils are projected to be at least 20% below the 400,000 tons imported last year. This, USDA explained, is due to increased competition from Malaysian palm oil in a market already reduced by stronger domestic production. In Southeast Asia, China is underbidding U.S. prices for soybeans.

In North Africa, U.S. vegetable oil shipments are expected to fall more than 50%, largely because of increased Argentine competition in Egypt. In sub-Saharan Africa, U.S. exports of vegetable oils are expected to be nearly 80% higher. The largest increases are expected in Ethiopia, the Sudan and Kenya, with massive food aid shipments to the first two.

Jojoba fields near maturity

Jojoba Growers Association President Carole Ann Whittaker, speaking at the AOCS 1985 annual meeting, predicted that increasingly large and stable supplies of jojoba oil soon will be available, hopefully sparking industry to commit resources to product research.

"During the period since 1979, approximately 42,000 acres of jojoba plantations have been established in Arizona and California," Whittaker said, adding, "Adequate research has been done to demonstrate that jojoba oil is a useful and valuable raw material for industrial purposes. However, the industrial user requires that adequate supplies be available at a price which is cost effective for his purposes."

While it is difficult to predict future production from existing jojoba plantations because even the oldest are not fully mature, she said, "It would appear hopeful that plantations comprised of heterogeneous populations of plants propagated from native seed will produce average yields of 2,000 pounds per acre or more at maturity." Whittaker explained that with yields increasing from 300 pounds per acre in the fourth or fifth year to 2,000 pounds per acre by the eighth or ninth year, "The production of jojoba oil from those plantations which are already established will increase rapidly to 42 million pounds, or 21,000 tons, a year within the next five to eight years. The amount could be increased significantly depending on the rate of development of new plantations and the quality of cultivars used to establish them."

Whittaker said the jojoba industry based on the harvesting and processing of the wild crop experienced increasing success despite erratic variation in seed availability and the price of oil. Initial buyers of jojoba oil, she explained, were small boutique cosmetic companies who perhaps marketed jojoba more for its fad value than for its functionality. However, with the development of commercial plantations, larger cosmetic manufacturers are incorporating jojoba oil into their products based on its functional value. Companies now are using jojoba oil in sun, skin and lip care products, while a limited amount has been used in lubricants.

Currently, U.S. processors handling jojoba use Hander, Anderson and French Oil Mill Machinery Co. presses to extract approximately 38% oil in a single run. A second pressing extracts an additional 3% to 5%. "Although the 50% oil content of jojoba seed can be extracted entirely with solvent extraction, the volume of seed processed currently has not yet warranted the use of solvent extraction," she said.

Mechanically extracted jojoba oil is essentially pure and requires little or no refining. Whittaker said the existing processing facilities have the capacity to produce 1.2 to 1.6 million pounds of oil per year but run at approximately 20% capacity due to limited seed. Current processing cost is 50 to 75 cents per pound of oil. "At maximum capacity, these mechanical extraction facilities could process oil at a cost of 8 cents to 12 cents a pound," she said.

Whittaker said the current cost of producing and processing oil from plantations is \$6 to \$7 a pound. However, that cost could be reduced to \$3.50 to \$5 a pound with improved harvesting techniques and the availability of solvent extraction facilities operating at full capacity. "The development of higher yielding plantations with select cultivars can further reduce the production cost of oil to \$2 a pound or less in the future," Whittaker predicted.

Various associations have been formed to encourage jojoba's commercialization. These include the Jojoba Growers Association, the Jojoba Marketing Cooperative, a jojoba processors association and a Jojoba Industry Advisory Council to coordinate efforts among researchers, growers, processors and government agencies. "What is lacking at this time is adequate coordination with the user industries and support of government agencies in continuing research programs," she said.

"The commercialization of jojoba has made progress, but it is far from successfully completed," Whittaker said. "The initial technologies and coordinating factors are in place to produce jojoba oil in adequate quantities to provide a useful specialty chemical. The ultimate objective of commercializing jojoba is to provide large quantities of a unique and valuable raw material from a renewable, low-energy-consuming resource to a variety of industrial users."

New pilot plant

Agriculture Canada this year is constructing an oilseed extraction pilot plant with equipment from French Oil Mill Machinery Co. Equipment will include a six-foot deep percolation extractor (based on using a quantity of 50 gallons of solvent); a two-stage desolventizer/toaster; an evaporator/strip, and solvent recovery equipment.

The facility is to be used for evaluation of oilseeds as part of Canada's program to promote quality and agricultural sales.

NCPA elects Evans

Samuel K. Evans, vice president of Producers Cotton Oil Co. in Fresno, California, has been elected president of the National Cottonseed Products Association. Evans is a past president of the National Institute of Oilseed Products. New vice president is Dan M. Hicks, president of Ninety Six Manufacturing Company in Ninety Six, South Carolina. He has served on numerous NCPA committees, as a member of the association's governing board and also on the National Cotton Council board.



Consortium aids developing areas

In the late Sixties, the League for International Food Education (L.I.F.E.) was formed (with AOCS participation) to provide information and expertise on nutrition and food to developing countries. In the 1980s, it is continuing to look for new ways to fulfill this role.

"I see L.I.F.E.'s purpose as finding those areas of nutrition and food in which other people are not working but where there is a need. In this way we can do some good while not duplicating what others are doing," Albert Meisel, executive director of L.I.F.E., says.

A consortium of the major U.S. professional societies concerned with food and nutrition, L.I.F.E. acts as a clearinghouse for developing countries for information on all aspects of food, from its production, harvesting, storage, processing, preservation and marketing to its nutritional

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value. Participating societies whose representatives serve on L.I.F.E.'s board of directors include, in addition to the AOCS, the American Association of Cereal Chemists, American Chemical Society, American Institute of Chemical Engineers, American Institute of Nutrition, American Society of Agricultural Engineers, American Society of Agronomy and the Institute of Food Technologists. L.I.F.E. is funded by the Office of Nutrition of the Agency for International Development (AID).

A primary function is to publish an informational newsletter six times a year. It sends out 8,500 copies of the newsletter to over 100 countries. Recent newsletters have included such topics as detoxifying the Lathyrus Pea, fish farming in arid lands, vitamin A interventions, treating cassava to prevent spoilage and efforts to promote breast feeding. As a result of the newsletters, L.I.F.E. receives many inquiries for more technical information.

"Questions can be very technical, or they can be from someone wanting old machinery," newsletter editor Brenda Higgins said. Higgins, who has her master's degree in nutrition science, was hired earlier this year to help answer questions channeled to L.I.F.E.'s Washington office. If unable to answer questions directly from information on hand in L.I.F.E.'s resource library, she tries to find someone who can. Participating societies provide the names of experts willing to answer inquiries and to provide their skills to those needing them in other countries.

Inquiries come from areas where implements are quite primitive, where there is no electricity, to regions where technologies are quite developed. Some of the questions Higgins has received have included how to make margarine, how to extract oil from avocados, how to process palm oil, how to keep food from spoiling and how to package food. There have been inquiries as well on expelling techniques suitable on a cottage level. Questions come from Peace Corps volunteers, local food and public health specialists in various countries, international civil services, AID staff, research institutes, country ministries, industrial development boards and food companies.

"On a village level, people find the newsletter valuable. It gives them a taste of information and a name to contact to get more information on the topic," Higgins says.

One need Higgins sees is for additional experts from participating organizations to offer their services. "L.I.F.E.'s technical inquiry program depends on a good roster of experts who can help answer questions," Higgins says.

Meanwhile, Meisel has been working on a number of additional projects for L.I.F.E.

One area of importance is gardening, seen as valuable not only to raise nutritional standards but also to provide more income on a local level.

"L.I.F.E. always has had an interest in small scale family food production. That interest seems to have accelerated since I came to L.I.F.E. in September 1983," Meisel notes. As part of its effort, L.I.F.E. recently published a compendium, *Home Gardens in International Development, What the Literature Shows*, as a resource for this subject.

Meisel, who gained much insight on development programs through his work with the U.S. Peace Corps and VISTA during the 1960s, sees household gardening projects "not only as a good way of improving nutrition but as a terrific community development tool to get local people involved in other projects to improve their communities."

A practical approach by L.I.F.E. has been to train people to teach others how to do home gardening. A training session for 25 people was held last fall. Those trained at that time now are conducting sessions sponsored by the Peace Corps and AID to train volunteers and their counterparts in the countries they serve. In addition, L.I.F.E., together with C.A.R.E., is sponsoring two training programs in Honduras, one for C.A.R.E. field workers in that country and a second for the staff members of five private voluntary organizations working in seven Central and South American countries.

One problem with gardening efforts undertaken by various groups in the past has been poor implementation, Meisel says.

"The failure rate of gardening projects is higher than it should be. Projects are placed in the wrong location—where there is no tradition of gardening, say, or insufficient water; or new vegetables are introduced without proper preparation of the client population; or developers work through the wrong community organization; or the project is improperly staffed. Field workers tend to think that gardening projects are easier to develop than they are, and fail to take into account all of the variables involved," Meisel says.

"I'm a great believer in a multiplying effect," he adds, explaining that a few individuals teaching a few others, with those then training others, will "multiply" what can be done.

Envisioning that L.I.F.E. could act as a household gardening information center, Meisel says such a service could provide both technical assistance to practitioners in the field and necessary research. However, he adds, L.I.F.E. will have to obtain additional funds to support the technical assistance, for instance.

"There needs to be an entity that can show that this micro approach can work, and there isn't one at present," he says. He hopes money can be raised from private sources to support this effort.

Another proposal Meisel is working on is to set up a network system, possibly within African countries, to disseminate information on what is being done by various groups in a country and what information is available from outside.

"We've noticed that there are a lot of efforts taking place in countries, yet the various groups within that country don't know what the others are doing, or what resources are available from the outside. This means that people may be reinventing the wheel when they don't need to," Meisel says.

This would entail setting up a form of communications network among groups and agencies so they can be in touch with each other, both at the grassroots level and vertically, to the ministries as well. "This is a very speculative idea. We're investigating how it could be implemented and funded," Meisel says.

Already the L.I.F.E. staff has made arrangements to speed up communication between its office and those making inquiries from various parts of the world. In a recent newsletter, L.I.F.E. informed its readers in Liberia, Togo, the Philippines, Thailand, Costa Rica, the Dominican Republic, Haiti, Botswana, Jamaica and the West Indies that they can communicate with L.I.F.E. via satellite by means of a computer-based electronic mail system. In those countries, L.I.F.E. has made arrangements for a local contact where people can leave their inquiries, which will be

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telecommunicated to L.I.F.E.

"We believe one of the factors discouraging people from sending in inquiries is that it can take three months by regular mail before we get the letter and can get the response back to them. Theoretically, using computers, we can get an answer back to them within three days," Meisel says.

Meisel is excited about the arrangement but admits, "No one has used the service yet." He adds, "I'm sure it will catch on in time, but you can't push technology until people are ready for it. I'm convinced that within three to five years, everyone will be using this approach."

Such computer linkage could put those with questions in the field in touch with experts on L.I.F.E.'s rosters quickly. "This would not eliminate the need for experts to go to a project site in another country, but it could mean keeping in touch after the expert returns home, or in the midst of a project where the expert planned to be there only at the beginning," Meisel explains. Such a project, he quips, could become "an electronic Peace Corps."

Because of the many inquiries received concerning food processing, Meisel also is exploring the possibility of starting a newsletter for food companies in developing countries, to keep them up to date on food processing developments.

Meanwhile, experts from the various participating organizations are a crucial part in carrying out L.I.F.E.'s work. Such support from the societies is important to the services L.I.F.E. provides, Meisel says, adding, "I would like very much to work even more closely with the societies and would welcome any ideas from them on how we can do that."

News briefs

James L. Vetter, a vice president of the American Institute of Baking in Manhattan, Kansas, has been elected president-elect of the American Association of Cereal Chemists. Other officers elected are Keith H. Tipples, AACC director, and Antoinette A. Betschart, AACC secretary. Tipples is director of the Canadian Grain Commission's Grain Research Laboratory in Winnipeg, Manitoba, and Betschart is research leader of the nutrients research unit at USDA's Western Regional Research Center.

Bunge Edible Oil Corporation has appointed Tom Robinson commercial manager for its Bradley region. His duties include responsibility for the foodservice, food processing and consumer divisions in the Midwest and Northeast.

Arthur P. Blackburn Jr. has joined Capital City Products Co. as foodservice marketing manager, shortening & oils division.

Anco/Votator Division of Cherry-Burrell, Louisville, Kentucky, has appointed Gary Limoge, Greg Stover and Terry Snell as sales representatives. Limoge will manage the East Central Region, Stover the North Central Region and Snell the South Central Region.

Sulzer-Escher Wyss Ltd. of Zurich, Switzerland has appointed Dieter Hody assistant vice president. Hody, who served as product manager-process engineer, joined the Process Engineering Division of the Zurich firm in 1978.

Andrew J. Butler, formerly commercial vice president of Dow Chemical U.S.A. and a member of the board of directors of The Dow Chemical Co., has been named president of Dow Chemical Europe. In other appointments, William S. Stavropoulos and Enrique J. Sosa have been named commercial vice presidents of Dow Chemical U.S.A. In addition, Yves Bobillier has been named president of Dow Chemical Latin America, Coral Gables, Florida, and Richard J. Fieler is the new president of Dow Chemical Brazil, Sao Paulo.

Obituary

A.C.H. GAALLOUL

AOCS has been informed of the death of student member Abdelaziz C.H. Gaaloul, who joined AOCS during 1984 while enrolled at Texas A&M University. He held a bachelor's degree from the University of Tunis and a graduate degree from the Food Processing Institute of Paris.

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