

World Fats & Oils Report

Higher oil prices predicted

Declines in sunflowerseed, coconut and palm oil production this year should begin to tighten oil supplies, bring down world stocks and, in the long term, increase oil prices, according to Siegfried Mielke, editor of *Oil World*. Mielke predicted world stocks of the seven major edible oils will fall to 5.24 million metric tons (MT)—a 500,000-MT decline—

by the end of October 1987. By the end of 1987/88, world stocks of those oils should fall to 4.9 million MT.

Mielke, who spoke at the 8th Antwerp Oils & Fats Contact Days in June, said declines in carry-over stocks probably would be accompanied by increases in oil disappearance.

“Vegetable oil prices are likely to recover significantly. The extent of the recovery will depend on the final outcome of the Northern Hemisphere oilseed crops in general, and of the U.S. crops in particular, which, in turn, will determine the extent of the probable recovery of oilseed prices,” Mielke said.

The U.S. Department of Agriculture (USDA) forecasts world soybean production to break the 100 million MT mark in 1986/87, with the U.S. crop making up 54.62 million MT of the total. Next year's U.S. soybean output tentatively is set at 49.7 million MT. That crop decline will help lower U.S. soybean and soybean oil stocks by September 1988, according to USDA. Ending stocks in the U.S. for September 1988 are forecast at 13.5 million MT for soybeans and 700,000 MT for soybean oil.

Meanwhile, U.S. inventories this September could reach record highs. Despite some increase in demand, U.S. producers have had difficulty moving large quantities of soybeans and soybean oil onto the world market due to an overabundance of supplies. Soybean oil exports are forecast at 500,000 MT this year, down from 750,000 MT in 1984/85. However, in the same period, soy meal exports rose from 4.46 million MT to a projected 6.35 million MT. Soybean meal demand was particularly strong in the European Economic Community (EEC), where large vegetable oil inventories have depressed crush margins.

TABLE 1

World Production and Consumption of Major Vegetable and Marine Oils (in Million Metric Tons)

	Production		Consumption	
	1986/87	1985/86	1986/87	1985/86
Soybean	14.31	13.61	13.87	13.3
Palm	7.97	8.13	8.18	7.87
Sunflowerseed	6.56	6.57	6.59	6.43
Rapeseed	6.63	6.16	6.43	5.92
Cottonseed	3.11	3.48	3.18	3.44
Peanut	3.04	3.13	3.03	3.12
Coconut	3.05	3.29	3.07	3.13
Olive	1.49	1.70	1.77	1.75
Fish	1.43	1.45	1.43	1.42
Palm kernel	1.09	1.12	1.08	1.09
Linseed	.71	.64	.64	.61
Total	49.39	49.28	49.28	48.10

Source: U.S. Department of Agriculture's Foreign Agricultural Service Circular Series, FOP 6-87, *World Seed Situation and Market Highlights*.

Feature

U.S. soybean oil ending stocks, forecast at 860,000 MT, are more than double last year's, while soybean stocks are projected at a record 15.79 million MT.

Although this year's U.S. soybean production is down from last year, overall increases in soybean, rapeseed and flaxseed will push world oilseed production to an estimated 196.8 million MT this marketing year. World cottonseed, peanut, sunflowerseed, copra, palm kernel and palm oil production fell. USDA's 1986/87 world crop production figures in millions of metric tons, with last year's output levels in parentheses, are as follows: soybean, 100 (96.88); cottonseed, 26.93 (30.4); peanut, 20.47 (20.55); sunflowerseed, 19.18 (19.33); rapeseed, 19.96 (18.55); flaxseed, 2.74 (2.36); copra, 4.93 (5.31); palm kernel, 2.49 (2.54), and palm oil, 7.97 (8.13).

Soybean production rose in South America and in the EEC. In the EEC, soybean production has risen fivefold in two years. This year's output is forecast at more than 830,000 MT. Rapeseed production in Canada has expanded to nearly 4 million MT this year, while in the EEC it has reached a record level every year since 1978/79.

The support for increased production in the EEC has been costly; European minimum support prices are three times higher than world prices, and according to USDA, this cost the EEC nearly 2.5 billion ECU in 1986 (1 ECU equals approximately US\$1.16).

The expense of subsidizing oilseed production caused the EEC earlier this year to propose a fats and oils tax on imported and domestically produced vegetable oils. The proposal caused consternation among the nations that export to the EEC and even within EEC member countries. As of press time, this issue was still unresolved.

A long period of drought held global palm oil production down this year, but a recovery is predicted, along with continued palm oil area expansion for next year. Low palm oil prices and a slump in petroleum prices in major growing areas in 1986 tightened foreign exchange earnings enough to set back palm oil expansion; *Oil World* said expansion will continue, but

at a reduced rate. By the year 2000, mature palm oil area is predicted to reach 5 million hectares and to produce 18 million MT of oil, compared with 2.4 million hectares and 7.5 million MT in 1986, *Oil World* said.

Other factors besides price that could affect palm oil expansion and production are the growing environmental concerns about clearing rain forests, problems with palm oil tissue culture research and concerns about using palm oil in foods.

No large-scale plantings of oil palm clones are expected for at least 10 years in Southeast Asia. Tissue culture research was set back when many cloned trees were found to be sterile. The Palm Oil Research Institute of Malaysia (PORIM) has established a committee to study the problem.

Proposed regulations in the U.S. that would require tropical oils to be labeled by type and by the phrase "a saturated fat" have drawn international attention. There is concern among world producers that palm oil, palm kernel and

coconut sales might decline if consumers concerned about health risks avoid these oils. In Pakistan, there already have been reports that palm oil consumption will drop this year due to consumer concern about the health effects of consuming palm oil.

Palm oil producers are responding by developing and planting palm oil varieties that produce a less saturated oil. The Indonesian Agricultural Research and Development Agency has an agreement with a private company to introduce new types of African oil palm that are higher in unsaturated fatty acids than traditional oil palm varieties. The new varieties of *Elaeis oleifera* are lower yielding than varieties currently in production.

Palm kernel production, at 2.49 million MT, and copra production, at 4.93 million MT, together fell by 5.5% this marketing year. Both crops suffered from drought in Southeast Asia. The downward trend for copra is expected to continue next year when the crop will decline to less than 4.5 million MT. The drop in copra production will push coconut oil stocks down;

TABLE 2

Top 10 Producers of the Major Edible Oils^a (in Thousand Metric Tons)

	Forecast 1987/88	1986/87	1985/86
U.S.	6613	6316	6031
EEC (12 countries)	5913	5600	5288
Malaysia	5423	4972	5481
China	4025	3847	3887
Brazil	2789	2769	2588
U.S.S.R.	2810	2763	2780
Indonesia	2469	2175	2224
East Europe	1905	1872	1642
Argentina	2016	1817	2111
India	1827	1729	1636

^aSoybean, cottonseed, sunflowerseed, rapeseed, coconut, palm kernel and palm oil.

Source: *Oil World Statistic Update*, June 1987.

Oil World estimates they will fall by 230,000 MT by next year.

Prices for coconut oil began rising earlier this year. In April, the coconut oil price in the U.S. was \$409 per MT, while the soybean oil price was \$339 per MT. Last April, the soybean oil price was \$389, and coconut oil was \$279.

The nearly 2-million-MT drop in Argentine sunflowerseed production will shorten supplies of sunflowerseed and sunflowerseed products until March 1988. Argentina, a major sunflowerseed exporter, cut sunflowerseed exports back to 15,000-20,000 MT in the second half of 1986/87, well below the

391,000 MT exported during the same period in 1985/86, *Oil World* said.

The Argentine decline will allow U.S. sunflowerseed exporters to boost exports to 400,000 MT, but the export level is far short of the 991,000 MT exported in 1984/85.

World sunflowerseed oil exports will drop to 1.82 million MT, from 2.17 million MT, in 1985/86. U.S. sunflowerseed oil exports have fallen to 140,000 MT.

The sunflowerseed decline also is providing opportunities for Canada. Traditionally, Mexico has imported large amounts of sunflowerseed from Argentina, but Argentina's reduced output has allowed Canada to expand its Mexican market for rapeseed. In the October 1987-September 1988 marketing year, Mexican rapeseed imports could reach 250,000 MT, *Oil World* said.

World cottonseed production probably will recover to 29.9 million MT and crush will rise 22.4 million MT in 1987/88, *Oil World* said. Most of the meal produced will remain in the producing countries because the EEC, formerly a major buyer, has tightened its aflatoxin standards.

This year's U.S. cottonseed crush is expected to fall to its lowest level since 1909. Approximately 2.5 million MT of the 3.45 million MT projected harvest will be crushed. Usually when production is low, a higher percentage of the crop is crushed, but increased interest in direct cottonseed feeding to dairy cattle and very low vegetable oil prices altered that trend in the U.S. this year. U.S. cottonseed oil production is set for 800 million pounds, the second lowest level on record.

World vegetable and fish oil production and consumption will rise marginally this year; total production is set at 49.39 million MT and consumption at 49.28 million MT (Tables 1-4). Most notably, soybean oil production rose from 13.61 million MT to 14.31 million MT, while palm oil production dropped from last year's 8.13 million MT to 7.97 million MT. World consumption of coconut oil rose 22% in 1985/86 when consumption

TABLE 3

Top Eight Exporters of the Major Edible Oils^a (in Thousand Metric Tons)

	Forecast 1987/88	1986/87	1985/86
Malaysia	5252	4888	5282
EEC (12 countries)	3398	3307	3058
Argentina	1556	1452	1578
The Philippines	810	1090	1163
U.S.	1252	927	1001
Singapore	806	927	860
Brazil	810	825	545
Indonesia	890	809	861

^aSoybean, cottonseed, sunflowerseed, rapeseed, coconut, palm kernel and palm oil.

Source: *Oil World Statistics Update*, June 1987.

TABLE 4

Top Eight Importers of the Major Edible Oils^a (in Thousand Metric Tons)

	Forecast 1987/88	1986/87	1985/86
EEC (12 countries)	3423	3450	3419
Africa	1858	1683	1806
India	1517	1528	1178
U.S.	857	923	1039
Singapore	784	901	1021
U.S.S.R.	838	778	547
China	928	656	317
Pakistan	829	645	930

^aSoybean, cottonseed, sunflowerseed, rapeseed, coconut, palm kernel and palm oil.

Source: *Oil World Statistics Update*, June 1987.

was 3.13 million MT. This year's consumption will nearly equal that, even though coconut oil production levels are declining. Palm oil consumption also is forecast to increase, to 8.18 million MT, compared to 7.87 million MT last year.

World production of secondary fats rose in 1986, but not as quickly

as in 1985. Production of margarine (figures do not include China) rose to 8.58 million MT, while salad and cooking oils reached a record 4.38 million MT in 12 countries. In *Oil World's* survey of 16 countries, the compound fats and shortening area declined marginally to 3.58 million MT. Total production in 1986

reached nearly 16.54 million MT, up from 16.18 million MT in 1985 (Table 5).

Most of the production slowdown is in the U.S., where last year's total production rose by only 1% to 6.44 million MT, compared to a 6.7% increase the year before. Early figures for January-March 1987 for the U.S. indicate first quarter production figures are down 4% from 1986, with most of the decline occurring in the compound fats and shortening sector.

The country summaries that follow are based primarily on reports filed with the Foreign Agricultural Service by agricultural officers at U.S. embassies around the world. The information is supplemented with data from other USDA sources, from *Oil World* and from *The Cocomunity*, a bimonthly newsletter published by the Asian and Pacific Coconut Community.

TABLE 5

Margarine, Compound Fat/Shortening and Salad Oil Production for Selected Countries (in Thousand Metric Tons)

	Jan.-Dec.	Margarine	Compound fat/ shortening	Salad oil	Total
U.S.	1984	1125.3	2298.8	2546.5	5970.6
	1985	1180.8	2497.0	2694.0	6371.8
	1986	1265.1	2437.2	2738.0	6440.3
U.S.S.R.	1984	1427.0			1427.0
	1985	1411.4			1411.4
	1986	1460.0			1460.0
Japan	1984	251.7	147.7	137.2	536.6
	1985	241.0	148.6	145.2	534.8
	1986	238.1	170.7	146.5	555.3
India	1984	909.1			909.1
	1985	896.5			896.5
	1986	919.4			919.4
Pakistan	1984	621.2			621.2
	1985	729.3			729.3
	1986	800.0			800.0
The Netherlands	1984	265.3	241.0		506.3
	1985	282.3	232.4		514.7
	1986	264.7	246.0		510.7
West Germany	1984	482.6	106.1	328.6	917.3
	1985	466.4	111.2	328.8	906.4
	1986	473.9	115.7	344.1	933.6
United Kingdom	1984	381.1	114.8		495.9
	1985	377.5	107.8		485.3
	1986	384.0	104.0		488.0
Canada	1984	149.2	197.7	179.5	526.5
	1985	163.6	206.5	199.4	569.5
	1986	148.9	217.1	207.9	573.9
Poland	1984	169.0	25.4	88.6	283.0
	1985	173.0	24.3	93.7	291.0
	1986	192.0	24.0	84.0	300.0
Brazil	1984	289.0			289.0
	1985	298.0			298.0
	1986	315.0			315.0

Source: *Oil World Statistics Update*, May 8, 1987.

Argentina

Argentina's total oilseed output fell about 1.3 million metric tons (MT) from the 12.4 million MT produced last year. A slight increase in the soybean crop, which reached an estimated 7.4 million MT, was not enough to counterbalance the loss of nearly half of the sunflowerseed crop. Sunflowerseed output fell to 2.5 million MT—some estimates are even lower—from 4.1 million MT in 1985/86. Low prices, poor weather at planting and rain during the harvest caused the decline.

As a result, Argentina, traditionally the world's major sunflowerseed exporter, has sharply curtailed exports of sunflowerseed and sunflowerseed products this year. According to *Oil World*, total sunflowerseed exports from Jan. 1 through mid-May 1987, registered at 44,200 MT, compared with 139,000 MT in January/April 1986 and 95,000 MT in May 1986 alone. Argentina is also expected to hold onto a larger share of its sunflowerseed oil production to meet domestic demand of approximately 350,000 MT. The projected sunflowerseed oil exports from March 1987 through February 1988 are 580,000 MT,

down 44% from the period March 1986-February 1987, *Oil World* said.

Despite heavy rains, decreased yields and increased field abandonment due to the weather in some regions, USDA's estimate for soybean output is set at 7.4 million MT, up slightly from last year. However, the Argentine Grain Board has estimated that the final figure for soybean production could be as low as 6.9 million MT.

Next year's soybean-crop projection figures range from 7.5 to 8 million MT, as increasing numbers of farmers are switching to soybeans following reports from the Sociedad Rural (Rural Society) that soybeans will be the most profitable crop. Low grain prices and limited returns on crops such as corn and sorghum also will help drive Argentina's total oilseed production up to 12.4 million MT once again.

Argentine processors continue to export oil and meal rather than seed under the differential export tax program. The export tax for soybeans, sunflowerseed, peanuts and cottonseed is 15%; it ranges from 1.5 to 3% for oil and from 3 to 11% for meals.

Although the government is expected to eliminate those taxes, oilseed crush is expected to increase at the expense of exports because oilseed products remain more profitable. Reports indicate that Argentina's daily crushing capacity is about 38,000 MT. For a 320-day crushing year, total capacity is estimated at 12.2 million MT.

The combined export tonnage and value for both soybean and sunflowerseed oil and meal far exceed those for seed. Export levels in metric tons for 1986/87 are soybean oil, 669,000; soybean meal, 3.3 million; sunflowerseed oil, 603,000; sunflowerseed meal, 925,000; sunflowerseed, 150,000, and soybeans, 2.5 million. The preliminary U.S. dollar value for oilseed exports has been set at \$740 million; the oilseed products are valued at more than \$1.58 billion.

The Netherlands continues to be the major importer of Argentine soybeans. Mexico and the European Economic Community will account for more than 75% of Argentina's sunflowerseed exports.

Although Argentina will hold on to a larger percentage of its sunflowerseed oil production, a 33% increase in domestic soybean oil consumption still is expected this year due to the decreased sunflowerseed crop. Overall, food oil consumption will rise to 477,000 MT. Of that, 349,000 MT will be sunflowerseed oil while 100,000 MT will be soybean oil.

Increased flax and peanut production also are projected this year. The peanut expansion is driven partially by hopes of higher international market prices and a smaller U.S. crop. The crop for this year is set at 185,000 MT. Some peanut, cottonseed, flaxseed and linseed products will be exported.

Australia

Poor weather conditions for sunflowerseed and low prices for cotton helped drive overall oilseed production down in Australia this calendar year. Total oilseed output fell to 769,000 metric tons (MT), from 890,000 MT in 1986. Early figures indicate cottonseed output fell 65,000 MT, from 375,000 MT, while sunflowerseed fell 50,000 MT, from 228,000 MT. Of the three major oilseeds, only soybean output increased—production reached 135,000 MT.

Oilseed output rose rapidly in Australia from the mid-1970s through the early 1980s. Production peaked at 900,000 MT in 1985; it is expected that Australia will maintain similar production levels for some time. Because the margarine and cooking/salad oil markets absorb most of Australia's oilseed output, any further expansion in oilseed output and margarine consumption would have to parallel the annual population growth rate of 2.5%.

In 1986, 105,000 MT of table margarine, 35,000 MT of industrial baking margarine and 45,000 MT of cooking oil were produced.

Australia remains a minor player in international oilseed trade. No oil is exported; only 42,000 MT of cottonseed and 3,000 MT of peanuts are scheduled for export.

However, the decline in 1987 crop production will force Australia to increase imports this year. Of the 134,000 MT of oil to be imported, 93,000 MT will be palm oil, 18,000 MT coconut and 20,000 MT soybean.

Australian growers are likely to continue favoring coarse grains and grain legumes over oilseeds because they are more profitable. Australia's production of lupins has increased fivefold since the beginning of the 1980s, with annual production now exceeding 700,000 MT. According to USDA, crushed lupin seed can be used as a replacement for soybean meal in broiler and layer rations and can substantially replace other concentrated protein sources in hog rations. During July 1985-June 1986, Australia shipped approximately 350,000 MT of lupins to markets around the world, with the Netherlands receiving 180,000 MT. Through April of the current marketing year, Australia already had shipped more than 215,000 MT to Holland.

Austria

Under the Austrian Oilseed Project, combined rapeseed and sunflowerseed production is expected to reach 73,000 metric tons (MT), an increase of almost 43,000 MT over last year. The project is aimed at shifting land from grain to oilseed crops.

The government tentatively set target expansion areas of 30,000 hectares for rapeseed and 20,000 hectares for sunflower. Due to the government's planned high base subsidy, USDA believes 25,000 hectares of rapeseed were planted.

Sunflowerseed production was set for 6,000 MT this year and 15,000 MT next year. Rapeseed production is expected to reach 67,000 MT in 1986/87, with next year's crop projected at 80,000 MT, more than triple the 26,000-MT crop produced in 1985/86.

The major shift in agricultural policy came about last year because the farmers' economic situation was deteriorating, and the government

Feature

was faced with increasing export subsidies for surplus grain, particularly wheat. The government projected that subsidies for 60,000 hectares of oilseeds and pulses would be half as costly as subsidies for the same area in grain production.

In 1987/88, Austrians will consume approximately 77,000 MT of oil: soybean oil, 21,000 MT; sunflowerseed oil, 27,000 MT; rapeseed oil, 25,000 MT, and coconut oil, 4,000 MT.

Brazil

Record soybean yields pushed total oilseed production to 18.5 million metric tons (MT) this year, 20% above last year's drought-reduced 15.35 million MT. Soybeans, which make up approximately 90% of Brazil's oilseed output, increased

to 17 million MT—3.3 million MT above last year—despite a cutback in area to 9.3 million hectares. At planting time, the government's policy was aimed at shifting land away from export crops such as oilseeds and toward food crops such as rice, dry beans and corn.

Soybean exports should more than double from 1.1 million MT in 1985/86 to 2.5 million MT; the forecasts for soy meal and soy oil imports are 7.75 million MT and 750,000 MT, respectively. Next year, soybean export estimates range as high as 4 million MT.

Smaller soybean harvests, low international prices and a strong domestic demand for meal and oil due to improved purchasing power were the determining factors in last year's export decline and increased imports. This year's large soybean crop and changes in the import policy for oilseeds and oilseed pro-

ducts will limit total imports of oilseed and products to 120,000 MT and of oil to 20,000 MT. In 1985/86, 359,000 MT of seed and 159,000 MT of oil were imported.

In early 1987, the Brazilian government suspended imports on many commodities as a way to improve its balance-of-payment standing. Import licenses were temporarily suspended for oilseed, meal and oil. The only raw materials allowed were those that would be imported under a drawback system whereby end products would be re-exported.

In other action, the government devalued the cruzado to make Brazilian exports more competitive on the world market. It raised the minimum price support for all crops, including export crops, by an average of 38%. Peanut supports rose by 47% because the crop requires much hand labor.


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Production of Brazil's two other important oilseeds, cottonseed and peanuts, is forecast downward. In calendar year 1986, 1.39 million MT of cottonseed were produced; this year's harvest fell to approximately 1.15 million MT, and oil production is down to 175,000 MT. Peanut production, meanwhile, is continuing on the downward slide that began in 1972 when peanut levels were 930,000 MT. This year's area harvested dropped to less than 200,000 hectares as more and more land was diverted to soybeans and sugar cane.

This year's domestic demand for oil and meal will depend on whether Brazil undergoes another economic recession. Brazilians are expected to consume 1.97 million MT of oil in 1986/87, down slightly from 2.03 million MT in 1985/86. Meal consumption is up to 3.48 million MT, 130,000 MT more than last year. In 1986, total vegetable oil consumption rose by 24% and meal consumption rose by 20% when the government froze retail prices under the Cruzado Plan.

Canada

Canada's oilseed stocks are expected to pass the 2-million-metric-ton (MT) mark at the start of the 1987/1988 marketing year. Crop production figures indicate growers raised record rapeseed and flaxseed crops and a near record soybean crop in 1986/87.

Excellent weather during the growing season pushed the rapeseed crop to 3.9 million MT, 11% higher than last year's crop and 50% above the 10-year average. Flaxseed output rose to 1.07 million MT, 17% higher than the previous record crop. Soybean production is estimated at 988,000 MT. Low prices and disease forced sunflowerseed production down to 53,000 MT.

Early forecasts predicted that rapeseed ending stocks would top 1.5 million MT, but increases in crush demand and in exports have caused forecasters to lower their initial figure to 1.2 million MT. Almost two million MT of Canadian rapeseed, or canola, will be exported, mainly to Japan, Mexico

and Western Europe. Last year, Japan bought almost 90% of the exported seed. *Oil World* estimates that Canadian exports to Japan may reach 1.7 million MT of seed, while Mexico will import 200,000 MT. Early figures from *Oil World* showed 1.63 million MT of rapeseed were exported between Aug. 1, 1986, and May 24, 1987, already above the 1.45 million MT total for the full August 1985/July 1986 marketing year.

Canada is looking more and more to the U.S. as a place to expand its sales of canola (double-zero rapeseed) oil, now that Procter & Gamble uses it in a cooking/salad oil product. However, before making any purchase commitments, other buyers reportedly are awaiting the outcome of the American Soybean Association's challenge of the use of the name "canola" to denote rapeseed oil from Canada. *Oil World* forecasts that imports into the U.S. could reach 64,000 MT this year.

Approximately 650,000 MT of flaxseed crop will be exported, with about two-thirds going to Western Europe. Next year, Canada probably will expand its flaxseed exports because U.S. flaxseed plantings declined in 1986/87. However, low prices and high stocks still will deter Canadian flaxseed farmers from increasing production.

Canada will be a net exporter of soybeans in 1986/87, exporting 200,000 MT and importing 150,000 MT. Soybean crop area continues to increase moderately at the expense of corn because Canadian growers receive a better price for soybeans.

Although Canadian producers and processors claim tropical oils are taking over in the domestic food-use market, statistics indicate Canadians will consume 335,000 MT of canola oil this year. Canola oil now holds about 60% of the domestic market, up from 52% in 1983, while soybean oil's share has dropped from 29% to 23%.

China

China will import between 700,000 and 750,000 metric tons (MT) of fats and oils in 1986/87, as con-

sumer demand increases. Total oil imports will be five times greater than the 140,000 MT imported in 1984/85, when China was still a net exporter of oil and fats. According to *Oil World*, from October 1986 to March 1987, China imported 440,000 MT of oil, nearly three times the amount imported in the same period last year. Most of the import increases came from soy and palm oil, but rapeseed oil purchases also rose. In addition, sunflowerseed oil was imported for the first time. Among the fats and oils imported between October 1986 and March 1987 were 163,000 MT of soybean oil, 159,000 MT of palm oil, 24,000 MT of rapeseed oil, and 3 MT of sunflowerseed oil. During the same period last year, 46,000 MT of soybean oil, 51,000 MT of palm oil and 1,000 MT of rapeseed oil were imported. China's oil-importing trend is forecast to continue into 1987/88, given the prices and abundance of vegetable oils on the world market.

Total oilseed production is forecast at 30.1 million MT, down from 31.6 million MT in 1985/86. Soybean and rapeseed production are both forecast to increase this year—soybeans to 11 million MT and rapeseed to 5.8 million MT. Peanut and cottonseed production each will fall to 5.9 million MT and sunflowerseed will decline to 1.5 million MT this year.

China is relaxing its trading policy for oilseeds somewhat. Although it will remain a net oilseed exporter (1.5 million MT of seed will be exported this year), the push to export as much as possible will not be as great as it has been, USDA said.

This year, 300,000 MT of soybeans will be imported, slightly less than last year. Exports, meanwhile, will fall to 800,000 MT, a 450,000-MT decline from a year ago.

If the livestock and feed industries develop as the Chinese government hopes, there will be more pressure to retain seed for domestic use. China plans to expand mixed and compound feed production from 16 million MT in 1986 to 50 million MT in 1990. The feed production goal in the year 2000 is 100 million MT.

Czechoslovakia

Rapeseed and sunflowerseed harvests are expected to continue increasing in line with Czechoslovakia's 1986-1990 Five-Year Plan. The rapeseed crop is forecast to reach 305,000 metric tons (MT) while sunflowerseed is projected at 57,000 MT; these are up from 288,000 MT and 42,000 MT, respectively, in 1985/86.

Czechoslovakia does not export any oilseeds or oilseed products, and import levels are expected to remain somewhat steady even with production increases. Oilseed imports are limited to approximately 5,000 MT of soybeans, 605,000 MT of meal (mainly soybean) and 38,000 MT of oil.

Trade patterns are expected to stay the same. Hungary will continue to supply all sunflowerseed oil, which makes up more than 80% of total oil imports this year. China supplies 5,000-6,000 MT of soybeans and India sells soybean and peanut meal to the Czechs. Brazil and West Germany have also supplied soy meal to Czechoslovakia.

Changes in oilseed import patterns may occur when a new crushing plant goes on-line in Olomouc in 1988. The plant's annual crushing capacity will be about 200,000 MT; the government also is considering construction of another plant in Bratislava. Four plants are now operational in Czechoslovakia.

Egypt

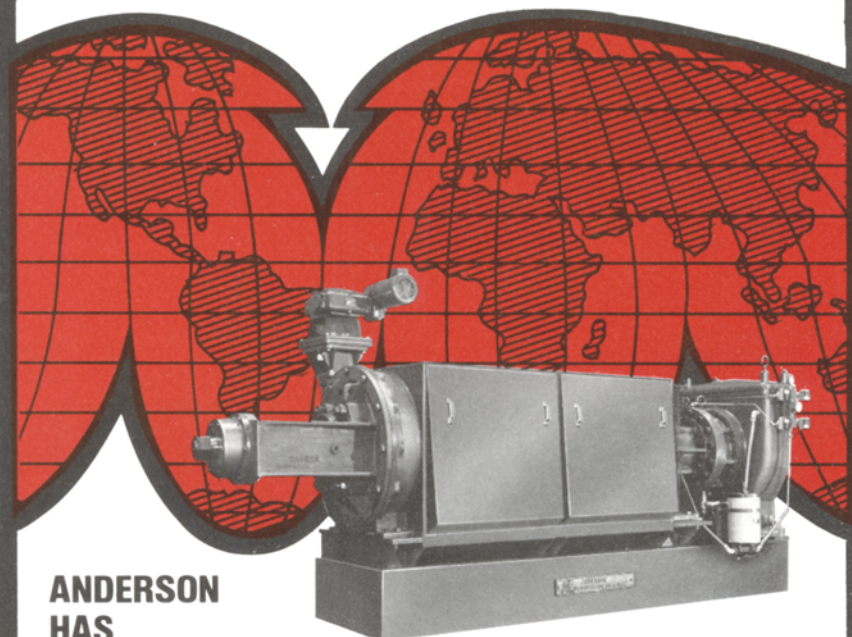
With the projected decline in the cottonseed crop, the nation's dominant oilseed, Egypt is expected to be more dependent on foreign oilseeds and oilseed products in 1986/87. Poor weather and problems with insects are expected to push cottonseed production down to 645,000 metric tons (MT). Although Egypt will produce approximately 140,000 MT of soybeans, 40,000 MT of peanuts, 23,000 MT of flaxseed and 15,000 MT of sunflowerseed, production will not meet domestic need. All but the 13,000 MT of peanuts scheduled for export will be consumed.

Egyptians will consume 582,000 MT of oil in 1987. This means 430,000 MT of oil, mainly cottonseed and sunflowerseed oil, will be imported to meet the need. In addition, 450,000 MT of imported soybean meal will cover about half of the 922,000-MT demand.

There is increasing interest for crushers to import oilseeds instead

of products because more than 200,000 MT of soybean crush capacity remains idle in the public and private sectors. Most crushing is done by eight public sector companies that have a capacity to handle 700,000 MT of cottonseed and 300,000 MT of soybeans. Two private sector companies with soybean crushing capacity can use only

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imported soybeans, as local production is reserved for public sector plants. When policy favoring imports of oilseed products over oilseed will change is uncertain because the major importer—the government—would have difficulty paying for seed instead of oil and meal. Now seed is often sold under credit agreements.

A palm oil refining plant in the Suez free zone is scheduled to begin operation in August. It will have the capacity to refine 200 tons of oil per day and to hydrogenate 30 tons daily. Most of that production will go to Saudi Arabia.

Although the government has raised prices for cottonseed and soybeans, it is considered unlikely that production will offset imports in the near future. Higher profitability of corn and vegetable crops discourages large oilseed production increases.

Finland

Finnish crushers estimate the 1986/87 rapeseed crop at a record 130,000 metric tons (MT), up from 94,000 MT last year and above the 115,000-MT production goal set by the government.

Only 10% of the crop is a double-zero type; spring turnip rapeseed makes up 95% of the crop, and spring rapeseed averages about 5% of production.

The three Finnish crushing groups crush the sole domestic oilseed crop for meal; this year's rapeseed meal output will rise to 78,000 MT, all earmarked for animal, particularly for animal, feed. To meet the 239,000-MT demand for animal feed, Finland will import 65,000 MT of fishmeal and will produce 92,000 MT of soybean meal from 115,000 MT of imported seed.

Oilseed import levels are determined after the government calculates how much feed must be produced annually. Current Finnish policy prohibits oilseed meal imports because of strict sanitary regulations.

The Finnish Central Union of Agricultural Producers wants the government to raise the domestic

seed production goal to make Finland less dependent on imported protein. The government is reluctant to do so because it would increase the cost of subsidies.

Because so much oilseed is imported to produce feed, Finland has an exportable surplus of rapeseed and soybean oils. Total oil production in 1987 is forecast at 62,000 MT, but only 39,000 MT will be consumed for domestic food and feed.

Reports indicate the Finns are changing their fat consumption habits. In the past year, margarines and butter/margarine mixes have expanded their market share at the expense of butter. The government now permits production and marketing of light margarines with a 40% fat content.

France

French oilseed production for 1987/88 is forecast to exceed 4 million metric tons (MT), 31% over this year's 3.06 million MT crop and three times the 1980 production level. Rapeseed, sunflowerseed and soybeans are forecast to reach record levels.

This year, poor weather drove rapeseed production down to 1.07 million MT, a 20% decline compared to last year. In 1987/88, rapeseed growers are forecast to plant 700,000 hectares—312,000 hectares more than this year—and to harvest 1.82 million MT of seed. The tightening of European Economic Community (EEC) dairy quotas has allowed growers to put pasture land into rapeseed production.

Rapeseed production trends may change in France as the EEC shows increasing favor toward double-zero rapeseed varieties. Currently, French farmers tend to plant high-yielding, single-zero varieties such as *Bienvenu*, even though low erucic acid-low glucosinolate varieties are available. They may shift if the EEC proposal to support only double-zero varieties beginning with the 1988 crop becomes effective. The bonus and crushing subsidies granted to double-zero varieties are forecast to double in 1987/88.

High EEC prices and a rising demand for sunflowerseed oil has caused an eightfold increase in sunflowerseed production since 1980. This year's production reached 1.88 million MT, and next year's should break the 2-million-MT mark. Soybean production, while limited, is forecast to rise to 140,000 MT this year, up from 46,000 MT in 1985/86. Some optimistic French growers see soybean area rising to 400,000-500,000 hectares should suitable early varieties become available.

Most of next year's production increases will be exported. Seed exports are forecast at 2.42 million MT, an increase of 760,000 MT over this year. Imports, meanwhile, will drop to 575,000 MT from this year's 655,000 MT. Two-thirds of the decline will be due to the curtailment of soybean imports. A cutback in peanut crush will lower peanut imports to 45,000 MT this year and 50,000 MT next year. The peanut crush has been declining in recent years due to concern about aflatoxins; however, food use of peanuts is rising.

The decline in dairy stocks combined with large wheat and pulse supplies will slow demand for meal to 1.5 million MT this year and next, and total oil production and consumption figures are not expected to change greatly between this year and next. Oil production will rise slightly from 625,000 MT to 634,000 MT and total consumption from 709,000 MT to 717,000 MT. There will be greater displacement of peanut oil by sunflowerseed oil, and rising palm and lauric oil imports will be substituted for rapeseed and soybean oil.

Most of France's crushing capacity is being used. Approximately 1.8 million MT of seed were crushed last year, and the figures for this year and next are about the same. Efforts are under way to expand that capacity, but two plant projects which were announced last year—the Vamo Mills plant in Sete and the Huileries de L'Arceau plant in central western France—have been delayed for financial reasons. COMEXOL, a major softseed crusher, is reportedly planning to build a crushing plant near Rouen.

Federal Republic of Germany

Favorable rapeseed prices relative to grain encouraged West German farmers to expand rapeseed area by 30% this past winter; early forecasts predict that will raise the 1987/88 rapeseed harvest to 1.19 million metric tons (MT), an increase of 234,000 MT over this year. Currently, 40% of the crop is double-zero varieties, but by 1988, farmers, cooperatives and extension service officers hope to shift completely to low erucic acid-low glucosinolate types.

Meanwhile, industry representatives anticipate that sunflowerseed area will expand to 50,000 hectares in 1989. How much expansion really will occur is difficult to predict, USDA said. West Germany's first

sunflowerseed trial crops were not harvested until 1986; this year, 15,000 MT will be harvested. Next year, that figure should double. The German extension service, however, has warned farmers that climatic conditions in West Germany make growing sunflowerseed risky.

West Germany remains an oilseed consumer nation. This year's total oilseed production is 971,000 MT, but oilseed imports will rise slightly, to 5.2 million MT, most of which will be crushed for meal. Because imports are unrestricted and duty-free, West German oilseed crush patterns follow world supplies and prices. In 1986/87, total crush will increase to 5.7 million MT, from 5.4 million MT. The 1986/87 crush figures in metric tons for the individual oilseeds (with 1985/86 figures in parentheses) are as follows: soybeans, 3 million (2.9 million); rapeseed, 1.9 million (1.8

million); sunflowerseed, 350,000 (354,000); flax, 349,000 (309,000), and copra, 70,000 (70,000). Larger soybean contracts and increased rapeseed availability have been the major causes of this year's expansion.

Total production, forecast at 4 million MT this year and next, is up from the 3.8 million MT produced in 1985/86. The future market development for some protein meals will be influenced by the 8.5% cutback on milk quotas that went into effect in April and possibly by requests from government officials and farm leaders for restrictions on nongrain feed imports. More stringent demands from West Germany for copra producers to limit aflatoxin levels may limit copra meal use as well. Inexpensive copra and palm kernel meal replaced corn gluten, peas and soybeans last year. Problems with aflatoxin levels have driven peanut



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and cottonseed meal from the West German market.

In other trade, import levels for palm, palm kernel and coconut oils will drop this year to 198,000, 69,000 and 191,000 MT, respectively. Last year's levels were 259,000, 72,000 and 221,000 MT.

Vegetable oil production reflects the West German crushing pattern from 1982. Between calendar years 1982 and 1986, oil production rose, but the shares held by different oils varied. Soybean oil output fell from 642,000 to 522,000 MT, while rapeseed rose from 375,000 to 709,000 MT. Sunflowerseed oil went from 194,000 to 142,000 MT, and coconut dropped to 45,000 from 100,000 MT. Linseed oil production more than tripled, from 38,000 to 115,000 MT, over the same period. Total oil production for this marketing year is slightly more than 1.6 million MT.

Extremely low prices in recent years have increased industrial use of vegetable fats and oils. The industrial sector used 445,000 MT of fats and oils in 1984; by 1986, usage was up to 834,000 MT. During that time, there was some substitution of fossil fuels with organic fats.

German Democratic Republic

Rapeseed production in 1986/87 reached an estimated 406,000 metric tons (MT)—well above the East German national production goal of 300,000 MT per year, yet still short of domestic demand. As a result, 46,000 MT of sunflowerseed and soybeans will be imported this year, and import requirements will continue to range from 50,000 to 150,000 MT per year in the near future. In addition, 1.4 million MT of meal, mostly soybean, will be bought this year to maintain livestock populations. Exports remain insignificant.

Although the East German goal is to meet demand with domestically grown rapeseed, it is unlikely

the government will expand area much beyond the planned 130,000 hectares. Next year's crop is forecast at 306,000 MT, much closer to the nation's production goal. Last year, growers did plant beyond the goal due to higher guaranteed government prices, but because rapeseed competes with grain, the government is likely to request that growers convert planted rapeseed area back to its intended use. Consequently, any production increases will depend on improved yield.

Domestic consumption of oil for food uses remains low. About 210,000 MT of oil will be consumed this year; almost half will be rapeseed. The balance will be soybean and sunflowerseed oils.

Human consumption of vegetable oils, both directly and in food products, remains stagnant because Germans have been slow to change from eating animal fats to vegetable oils. However, a butter-vegetable oil blend containing 8-12% vegetable oil is now available in three districts.

The government's policy is to maintain the cow population at current levels. All milk produced goes to butter production, most of which stays in the domestic market because butter is not a valuable hard currency earner.

Hungary

The 856,000-metric-ton (MT) Hungarian sunflowerseed crop far exceeded the most optimistic forecasts for 1986/87 and surpassed last year's total oilseed production by 52,000 MT. This year's crop, combined with 53,000 MT of soybeans and 117,000 MT of rapeseed, pushed the estimated oilseed total to more than one million MT. A heavy winter kill of other crops early in the season allowed growers to plant sunflowerseed as a replacement.

The large crop of sunflowerseed for birdfeed, an important hard currency earner for Hungary, created some marketing problems. This caused the government to limit land for planting birdseed sunflower for next year; of the 370,000 hectares

scheduled for sunflower plantings, 340,000-350,000 hectares are designated for sunflowerseed for domestic crush.

The soybean and rapeseed crops have not met earlier expectations. No major expansion is forecast for soybeans due to their low yield relative to other crops. There is a shift toward greater production of rapeseed varieties for industrial purposes because rapeseed oil is not well liked by Hungarian consumers. Approximately one-third of the rapeseed grown is of lower erucic acid varieties, while the remainder contains high-erucic acid.

To maintain control over subsidies, the government will not raise producer prices this year. However, a new pricing policy favoring higher oil-content varieties is expected to begin with the 1988 harvest. Oilseed production is regulated to some degree by the industry, which tries to closely meet crushing demand by using production contracts, supplying good quality seed (most of it hybrid) and providing extension services.

Recent World Bank investments have focused on improving the quality, packaging and storage of oilseeds and products rather than on expanding crushing capacity. Work is also being done to open bottlenecks in the domestic and export supply channels.

Vegetable oil quality and production are increasing. This year, vegetable oil production rose to 372,000 MT, 77,000 MT more than last year. The increased production will boost sunflowerseed oil exports to 229,000 MT, from 162,000 MT in 1985/86.

Overall household consumption of vegetable oils is increasing, rising from 113,000 MT last year to 118,000 MT this year. Margarine consumption, which has been rising modestly, is expected to accelerate with the introduction of a soft breakfast brand.

India

India's aim of self-sufficiency in oilseed production to eliminate oil imports is still far from a reality.

Feature

Although the government has encouraged oilseed expansion, poor weather will limit oilseed production to 14.39 million metric tons (MT) this year, up a marginal 514,000 MT over the 1985/86 harvest. Increased oilseed production is expected to lower oil import levels to 1.35 million MT this marketing year.

Production of peanuts and rapeseed, India's dominant edible oilseeds, improved slightly, as did sunflowerseed and soybean production, but cottonseed and copra declined. Crop production figures in metric tons for 1986/87 are as follows (1985/86 figures in parentheses): peanuts, 5.9 million (5.54 million); rapeseed, 3 million (2.63 million); cottonseed, 3.22 million (3.65 million); soybeans, 1.1 million (982,000); sunflowerseed, 450,000 (301,000), and copra, 320,000 (380,000).

Expansion is planned for most oilseed crops next year. Peanuts, which are the largest source of domestic oil, are forecast to expand to 7.6 million hectares and 6.5 million MT. That expansion may be limited by the use of less fertilizer, limited availability of irrigation facilities and a shortage of quality seed. The government also has initiated a pilot project to shift land from wheat and rice to oilseeds. Interest in sunflowerseed is developing because it can be grown under varied conditions. Seed shortages and quality have been problems, but several private Indian firms have expressed interest in collaborating with foreign sunflowerseed producers. Reportedly, the Soviet Union has supplied India with high-oil sunflowerseed varieties that are being tested for adaptability to Indian conditions.

Early this year, *The Cocomunity* newsletter said the Indian government had doubled the allocation for coconut development and is considering a program to improve agrotechniques for coconuts that have been ravaged by root-wilt disease. The government also has launched a program providing incentive subsidies to coconut farmers with holdings smaller than two hectares. In other coconut developments, India will begin

producing coconut milk powder once the Al Tiptur plant goes on line. The proposed plant, to cost US\$7 million, will have the capacity to produce 2,000 tons of spray-dried coconut milk per year. Forty percent of that will be exported.

Soybeans have emerged as an important oilseed crop, with next year's crop projected at 1.3 million MT. Land studies in Madhya Pradesh, India's "soybean bowl," indicate an additional 2 million hectares could be diverted from low-yielding coarse grains to soybeans.

With the expectation that soybean production will increase, the Madhya Pradesh state government has made a commitment to expand soybean processing and has provided tax benefits and other incentives to growers. The national government, meanwhile, has plans to build 60 soybean processing plants with a combined processing capacity of 3 million MT per year.

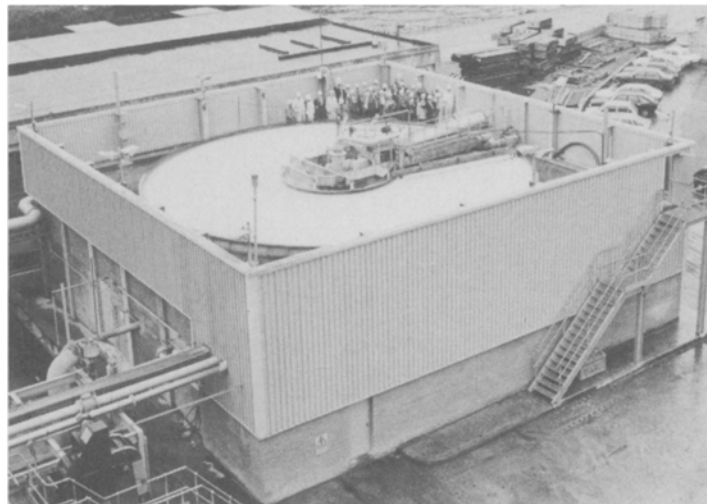
According to *The Cocomunity* newsletter, most of the plants will be built in Madhya Pradesh.

The government still does not permit the private sector to import oilseeds, despite the very large disparity between domestic oilseed production and crushing capacity. The government claims seed imports would act as a deterrent to domestic production, would be less economical than oil imports and would disrupt the government's ability to distribute oil through the public distribution system.

Crushers, meanwhile, have serious problems with underutilization. Total oilseed processing capacity is said to exceed 20 million MT; plants range from animal-driven ghanis to modern solvent extraction facilities. Most expeller units work at 50% below rated capacity. The overall capacity utilization for India's 314 solvent extraction units does not exceed 25%.

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The Soybean Processors Association of India (SOPA) is lobbying for imports of 500,000 MT of soybeans in order to use more of its underutilized capacity. The government reportedly is considering importing some soybeans through a drawback system in which the soy meal produced would be exported.

Vegetable oil production at 3.2 million MT is up about 100,000 MT, but total demand is 4.49 million MT. To meet the shortfall, 350,000 MT of soybean oil, 750,000 MT of palm oil and 250,000 MT of rapeseed oil will be imported. Soybean oil's import share rose 100,000 MT this year due to improved price, but palm oil still has wider consumer acceptance as a cooking oil.

Under an agreement between the Indian government and the Canadian International Development Agency (CIDA), Canada will supply India with crude rapeseed oil worth \$85 million (Canadian dollars) over the next five years. The oil is to be refined and sold on the open market in India through the Indian National Dairy Development Board. Proceeds will be used for developing an integrated oilseed processing and marketing system. CIDA will also provide \$4 million Canadian through the Cooperative Union of Canada for technical assistance and training.

Total meal production is forecast at 6 million MT for 1986/87, up from 5.93 million MT last year. Although soybean meal makes up only 12% of total meal production, it is the most important of the exported meals. This year's export levels for meal are soybean, 500,000 MT; peanut meal, 300,000 MT; rapeseed, 150,000 MT, and cottonseed, 80,000 MT. India traditionally has exported peanut and cottonseed meal, but strict aflatoxin standards in Europe and plentiful supplies of other meals on the world market mean more will be retained domestically. Major meal buyers include Poland, the German Democratic Republic, Czechoslovakia, Algeria and Hungary. Some sales also have been made in the Middle East.

Indonesia

For the first time in nearly 20 years, Indonesian palm oil production will not register an increase. Lower rainfall and reduced fertilizer use will cause palm oil production to level off at 1.3 million metric tons (MT), the same production figure as last year. Palm oil production had increased, on average, 12% per year between 1970 and 1986.

Even though yield and output are down, Indonesia's policy of promoting oil palm expansion remains unchanged. New areas in Sumatra and Kalimantan have been approved for palm oil development; next year, 380,000 hectares of oil palm will be harvested, compared with 360,000 hectares this year. According to *The Cocomunity* newsletter, the government has licensed seven private companies to develop plantation projects. More than 96,000 hectares are under consideration for the scheme. The companies reportedly have already conducted feasibility studies for the projects and have begun raising the seedlings.

Improved yields and increases in harvested area have brought predictions that next year's palm oil output may reach 1.4 million MT. This year, palm oil will make up 730,000 MT of the 775,000 MT of oil scheduled for export.

Palm oil output may be stagnant, but overall oilseed output is projected to increase by about 4% this year. Soybean expansion will boost total oilseed output to 3.3 million MT in 1987 and to 3.45 million MT in 1988. Soybean production is forecast at 990,000 MT and 1.07 million MT over the same period.

Soybean increases will be due to area expansion rather than to increased yield. Problems with insects and other factors have kept yields to approximately 1 MT per hectare. High-yielding varieties suitable for local conditions are not yet available, but government researchers are working on a high-yielding variety—up to 1.8 million MT per hectare—that is resistant to alu-

minum and can be grown on acidic soils. To stimulate soybean production, the government offers credit packages in the form of seed and fertilizer or cash.

Peanuts, like soybeans, are supported by the government, but are not given as high a priority; rice, soybeans and corn for the domestic food supply are considered more important. Peanut production for this year is forecast at 770,000 MT, up 5,000 MT from last year. Next year's output will rise by another 5,000 MT.

The only oilseeds to be imported this year are 50,000 MT of peanuts and 340,000 MT of soybeans. Most imports will be supplied by China. Soybean imports, however, should increase by 60% in 1988 to meet the demands of the new soybean processing plant scheduled to go on-line in early 1988. The plant has a soybean capacity of 1,000 MT per day and is expected to turn out 150,000 MT of soy meal and 32,000 MT of soy oil during the 1987/88 marketing year. It is the first time either commodity will be produced in Indonesia. The oil probably will be blended with palm oil and will be used domestically.

This year and next, no palm kernel seed will be exported; a new palm kernel oil extraction plant that became fully operational in 1986 will use much of the seed. Most of the meal produced will be exported to Western Europe. Only 5,000 MT of the 720,000 MT of coconut oil produced will be exported, because coconut oil sales remain unprofitable.

Italy

Italian oilseed production is rising dramatically. This year's crop is forecast to surpass the one-million-metric-ton (MT) mark, more than double the 462,000 MT produced last year. Next year's output is expected to be triple that of the 1985/86 crop.

The reason for the sharp rise is the continued expansion of soybean production in Italy. In the early

1980s, soybean cultivation was uncommon in Italy. However, strong price supports paid through the European Economic Community (EEC) have allowed the nation's growers to make Italy the most important soybean-producing area in Europe.

An estimated 814,000 MT of soybeans will be produced on 236,000 hectares this marketing year. Early projections for next year say that area could expand to 360,000 hectares or more, with a projected harvest greater than one million MT. Currently, soybean area is larger than that of traditional crops such as tomatoes and sugar beets. Growers have begun to double-crop soybeans after wheat and barley, and in many areas soybeans are replacing corn. Also, Italian growers have achieved an average yield of 3.5 MT per hectare, one of the highest in the world.

The soybean boom has been driven by the EEC's price support scheme, giving producers a prefixed minimum price that is higher than the world price. The unplanned rapid expansion of Italian soybean production is pushing the EEC to establish a financial threshold for soybean expenditures. If the EEC places a 1.1-million-MT ceiling on production, the growth of soybean area in Italy could slow down or stop.

Like soybeans, sunflowerseed production is also increasing due to EEC price supports. Production for this year is set at 236,000 MT, 74,000 MT more than last year. In southern Italy, sunflowerseed has replaced grains, forage crops and tomato plantings. However, oil content of Italian sunflowerseed seems poorer than seed from other countries. Southern Italy, in particular, has been penalized by the EEC decision to calculate prices on the basis of a 44% oil content, rather than 42%.

Rapeseed is still of minor importance relative to soybeans and sunflowerseed, but its production is forecast to reach 44,000 MT this year, slightly more than three times last year's production figure.

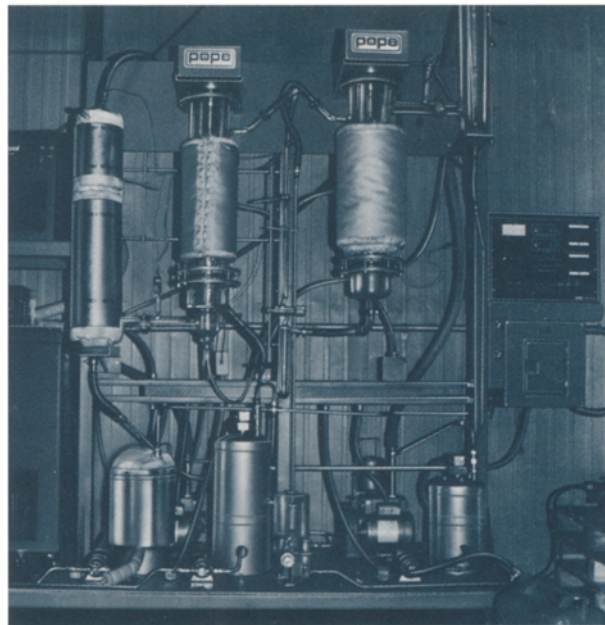
Italy, traditionally a large importer of oilseeds and products, will import less sunflowerseed and soybeans this year and will be a net exporter of sunflowerseed and soybean oils. This year, 950,000 MT of soybeans and 50,000 MT of sunflowerseed will enter Italy, down from 1.62 million MT and 71,000 MT, respectively, over last year.

Italy will import 30,000 MT of soybean oil and 30,000 MT of sunflowerseed oil, but will export 80,000 MT of soybean oil and 70,000 MT of sunflowerseed. Most of the exports will go to Africa and Asia.

The "off-year" olive oil cycle will lower total oil production to 740,000 MT, down 300,000 MT from last year. Even with a price

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ratio that favors seed oils, olive oil remains the favorite. Domestic consumption remains around 660,000 MT; domestically produced olive oil is expected to meet 310,000 MT of the demand, while the remainder will be imported.

Ivory Coast

Palm oil production for the Ivory Coast in 1987 is forecast at 210,000 metric tons (MT), a 7,000-MT decline from the 1986 record. Lower rainfall in large parts of the producing area and the replacement of older, marginally productive plantations have been the major factors in the decrease.

The upgrading of plantations is part of the Ivory Coast's Second Palm Oil Development Plan. In 1987, the government plans to replant 8,031 hectares and expand area by 5,055 hectares. In 1986, 88,000 hectares of oil palm were harvested. Even with lower world-market prices, palm oil exports reached 94,000 MT in 1986, up from 56,000 MT in 1985. The 1987 export level is 91,000 MT.

Palm kernel oil production in 1987 is set at 20,000 MT, up only slightly from last year. Reports indicate that increasing amounts of palm kernels had been going to waste because PalmIndustrie purchased less from growers due to market prices. That trend was expected to end when world prices improved. PalmIndustrie is the only authorized exporter of palm kernel oil and products; last year, it exported no palm kernel oil.

PalmIndustrie's buying practices also are affecting coconut production. Coconut is expected to decline in 1987 and 1988, following a trend that began in 1986. PalmIndustrie closed its rural buying centers temporarily after claiming it lost \$196 per ton on copra exported in 1986. USDA reports indicate the copra industry has become a serious drain on government resources; unless world prices improve, the copra industry will continue to receive less government assistance.

In other developments, the government of the Ivory Coast,

with France's assistance, plans to introduce jojoba. Large-scale industrial processing of peanuts is also being conducted on a trial basis at the Blohorn plant in Abidjan. However, efforts at the Unilever-owned subsidiary may be hampered by inadequate domestic supplies of peanuts. The 127,000-MT crop forecast for this year will be consumed domestically.

Other ventures include the construction of two oil mills and a prototype water treatment plant.

Japan

Although soybeans remain the oil-seed of choice, Japanese crushers will import only 4.84 million metric tons (MT) this year, up marginally from the 4.8 million MT imported in 1985/86. A slowdown in domestic meal demand is making the import of palm oil more attractive to crushers who want to fill oil demand without building excess stocks of soybean meal.

This year, 205,000 MT of palm oil will be imported, up 14,000 MT from last year. Imports have risen most rapidly since Jan. 1, 1986, when the government reduced the palm oil duty to zero as a trade concession to developing nations.

With new improvements in their palm oil technology, Japanese processors can more easily process palm oil into a liquid. This has led to increased blending of palm oil with other oils.

Increased availability of rapeseed from Canada, Europe and the U.S. may also hinder the growth of soybean imports. In 1985/86, Japan imported approximately 1.44 million MT of rapeseed, most of it Canadian canola. This year, import estimates range from 1.5 million MT to as high as 1.7 million MT, with U.S. growers from the Pacific Northwest displacing a small amount of Canadian canola.

Japanese soybean imports also may be influenced by U.S. soybean quality. In November 1986, Japan began buying U.S. soybeans under a new contract containing a bonus/penalty clause. The contract calls for soybeans with a maximum

moisture content of 13.5% and foreign material set at 1%, with a 2% maximum.

In addition, Japan will import 25,000 MT of coconut oil, 85,000 MT of peanuts, 83,000 MT of copra and 150,000 MT of cottonseed. Almost two-thirds of the 350,000 MT of fish oil produced domestically will be exported.

The increasing popularity of salad bars with Japanese consumers has helped alter manufacturing patterns for fats and oils products. Between 1982 and 1986, mayonnaise production rose to 208,906 MT, from 193,288 MT, and salad dressing manufacturing increased to 54,267 MT, from 36,363 MT. Margarine production fell from 244,126 MT to 235,330 MT over the same time period.

Korea

The steep increase in compound feed production during 1986, which helped push soybean imports over the one-million-metric-ton (MT) mark for the first time, continues to be a factor in 1987. This year, 1.1 million MT of soybeans will be imported, up from 1.03 million MT in 1986. The government has raised the import quota to meet demand.

Last year, demand for meal was so great that domestic soybeans were diverted to meal production for the first time, despite the fact that soybean production fell to 198,537 MT, the lowest level in 10 years.

This year, the Korean government's soybean production target is 234,000 MT, but USDA reports indicate that level will not be attained unless the government offers better incentives to growers who favor more profitable alternatives. Korea guaranteed purchase prices, purchased all oilseeds offered and limited imports to spur total domestic production, but overall seed production dropped to 320,000 MT in 1986 due to the soybean decline.

Peanuts, sesame seed and perillaseed production rose 23%, 18% and 22%, respectively, in 1986. This year, larger crops are

Feature

forecast; they include 42,000 MT of peanuts, 49,000 MT of sesame seed and 26,000 MT of perillaseed.

Imports of palm oil, the only vegetable oil imported by Korea, reached 182,000 MT in 1986, 70% higher than the record 1985 level. The level is expected to rise to 200,000 MT in 1987.

Malaysia, which supplies Korea with 90% of its palm oil needs, is trying to expand its market beyond the soap and instant noodle sector and into the home cooking oil area. Cooking and salad oils, mainly soybean oil, make up 40% of Korea's total fats and oils consumption. To stimulate interest in palm oil as a potential home cooking oil, the Palm Oil Research Institute of Malaysia (PORIM) has conducted a study to assess consumer reaction to palm oil blended with traditional cooking oils.

Domestic oil production remains low in Korea relative to demand; in 1987, 176,000 MT will be produced, but 383,000 MT will be consumed. Per capita consumption has nearly tripled since 1975, when it was 4.2 kg.

Malaysia

Dry weather, tree stress and less money for fertilizer will cause Malaysian palm oil production to drop to 4.4 million metric tons (MT) in 1986/87, down 370,000 MT from last year. Production is forecast to rebound to 5 million MT next year.

The production setback will temporarily limit palm oil exports; this year's level is set for 3.9 million MT, compared with last year's record 4.1 million MT.

Although export volume is reduced, marginal price improvements should leave total market earnings unchanged. Despite last year's high sales, the combined export value of Malaysia's three main crops—palm oil, palm kernel and copra—dropped due to low prices. From Jan.-Sept. 1985, exports of these oilseeds and products were valued at 12.7 million Malaysian dollars. During the same period in 1986, the figure was 9.8 million Malaysian dollars (in 1986, US\$1 equalled approximately \$2.60 Malaysian).

The palm oil price recovered to \$850 Malaysian per MT earlier this year, but at times has hovered quite close to the the growers' break-even point of \$700 Malaysian. In 1986, many producers lost money for the first time since Malaysia had entered the market as a major player. Last August, palm oil prices dropped to a record low of \$450 Malaysian per MT; the average yearly price in 1986 was \$579 Malaysian, well below the 1977 price of \$893 Malaysian and the record price of \$1,408 Malaysian in 1984.

Even with the price decline, Malaysia cleared another 75,000 hectares for palm oil production in 1986, bringing total area to 1.54 million hectares. However, before any further expansion occurs, the Malaysian government may be forced to reevaluate its palm oil expansion program, USDA said. Malaysian plans had looked at palm oil production as the means to encourage growth in the agricultural sector. Palm


oil, which represents 10-11% of Malaysia's total exports, was to increase foreign exchange earnings, provide employment and boost incomes.


Besides fluctuating price, Malaysia faces other marketing problems this year and in the future. Pakistan and Bangladesh, two major buyers, have raised import duties; meanwhile India, which purchased 18% of Malaysia's palm oil exports last year, is trying to limit imports this year. Thailand continues to ban imports.

Indonesia, an important palm-oil producing rival, claims it will produce 6.2 million MT of palm oil in 1993. Whether production could grow that rapidly is questionable, but any increases in Indonesian production could hinder Malaysian sales.

If the European Economic Community's (EEC) proposed fats and oils tax passes, sales to EEC nations may fall, and sales to the U.S. could be hampered if the American Soybean Association (ASA) is successful in its campaign calling for labeling of imported tropical fats as saturated fats. To counter the ASA campaign, Malaysia has established the Palm Oil Promotion Association (POPA), which reportedly will receive \$3 million Malaysian from the Palm Oil Registration and Licensing Authority (PORLA).

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By contrast, sales to China may improve. The Malaysian Edible Oil Manufacturers Association (MEOMA) is looking at ways to set up joint ventures in China.

Meanwhile, palm kernel production dropped to 1.32 million MT, down from 1.4 million MT. Palm kernel oil production dipped to 570,000 MT, but should recover to 645,000 MT next year.

Copra is no longer considered a particularly important crop under the Malaysian plans. This year, area is down to 320,000 hectares from 352,000 hectares in 1982, and the number of copra mills fell from 60 in 1970 to 25 in 1986. Production is not expected to exceed 235,000 MT because lower prices have often discouraged farmers from harvesting. Copra area may recover somewhat if growers begin intercropping copra with cocoa. The Malaysian government has allocated \$2 million Malaysian for smallholders to begin intercropping 20,000 hectares.

Domestically, Malaysia will use 553,000 MT of palm oil and 49,000 MT of coconut oil. Palm oil makes up 83% of total domestic consumption.

Soybean imports have dropped to 225,000 MT but will rebound to 240,000 MT next year. The outlook for crush is difficult to determine because it depends on the price and availability of imported meal. China, the major supplier, may be more restrictive about exports. Meal imports are set for 165,000 MT.

Mexico

Smaller soybean and cottonseed plantings as well as poor weather have pushed Mexican total oilseed production down to slightly more than 1 million metric tons (MT) this year, 15% lower than last year. To meet the oilseed shortfall, Mexico will import a projected 1.77 million MT, 235,000 MT more than last year.

Sales of U.S and Argentine soybeans and sunflowerseed and Canadian canola continue to expand in Mexico. Imports of soybeans, sunflowerseed and canola

totaling 1.1 million, 450,000 and 160,000 MT, respectively, are all up over last year. Greater expansion is predicted for next year, especially if the Mexican government continues to favor oilseed imports over product imports as a means to support the crushing industry and limit unemployment. Earlier this year, the government also raised import duties on rapeseed, corn and sunflowerseed oils from zero to 10%. Import permits are required for the oils.

Under current trade arrangements, the U.S. still dominates the soybean and sunflowerseed markets. Location and financial agreements under the GSM-102 make U.S. soybeans more attractive to Mexico. Although the U.S. will continue to supply about two-thirds of Mexico's import demand, questions are being raised about the quality and oil content of U.S. sunflowerseed.

The Mexican Institute of Oils, Fats and Proteins (IMAP) has tried to increase domestic sunflowerseed production, but this year only 15,000 MT of the 465,000 MT needed to meet domestic demand will be grown in Mexico. Even with subsidized costs and guaranteed payments, Mexican growers remain reluctant to plant. Resistance has been so strong that IMAP has been unable to sell high-quality seed, causing IMAP to switch its focus from sunflowerseed to rapeseed.

Reportedly, there is a growing acceptance of canola use in Mexico. This year, 160,000 MT of Canadian canola will be imported, 35,000 MT more than last year. Next year's level is forecast at 180,000 MT. Forecasts for canola oil imports range from 3,000 to 7,000 MT. The Canadians have provided credit and technical assistance for processing and refining; they also are working with IMAP to promote domestic rapeseed production.

Historically, there has been virtually no rapeseed production in Mexico, but the area north of Mexico City is under consideration as a possible site to develop the crop. USDA sees canola as a potential replacement for sunflowerseed in Mexico in the long term.

No major increases in total oilseed production are expected soon

in Mexico. This year's soybean production figure is 610,000 MT, while next year's is 640,000 MT, still 70,000 MT lower than the 1985/86 crop. Farmers are having difficulty expanding because fertilizer prices have risen faster than inflation, subsidies for farm credit have been cut by 20% and soybean seed prices have risen 95% over a year ago.

Cottonseed is expected to reach an average level of approximately 350,000 MT in 1987/88 after falling to 240,000 MT this year. The return to normal is expected as cotton prices improve.

Safflowerseed, the preferred oilseed in Mexico, did recover this year. Production reached 190,000 MT, but cultivation, quality and yield remain problematic for this crop. Copra production is down, and growers claim that trend will continue if prices don't improve and the government doesn't provide production assistance.

Overall, the Mexican crushing industry is in transition due to overcapacity. Several plants in the Guadalajara area have closed; in the future, eight to 10 of the larger integrated crushing and refining operations will handle most of the oilseed business. This year, the industry will produce 305,000 MT of oil and 1.23 million MT of meal.

The Netherlands

An overall recovery in the Dutch soybean crushing industry appears unlikely even though soybean crush will rise marginally to 2.4 million metric tons (MT) in calendar year 1987. Soybean crushing fell to 2.36 million MT last year, the lowest level since 1978. Last year's total oilseed crush at 2.99 million MT was the second lowest total crush for the same period.

Narrow and/or negative crushing margins were the main causes for the decline in soybean crush. Dutch soybean oil exports were less competitive on the world market due to competition from other oils.

Crush estimates for sunflowerseed and rapeseed are 375,000 MT and 265,000 MT, respectively; the

marketing prospects for both are expected to be better than for soybeans. To meet crushing needs, the Netherlands will import 2.8 million MT of soybeans, 316,000 MT of rapeseed and 427,000 MT of sunflowerseed.

Profits from fats and oils exports aren't particularly promising for the Netherlands next year. On a fat/oil basis, combined margarine and fats and oils sales for 1986 registered at 1.3 million MT, down 2.3% from 1985. Earnings for those exports dropped 28.8%. Similar trends are predicted for this year.

Dutch rapeseed production continues to drop due to the availability of cheap seed from European Economic Community producers. This year, only 20,000 MT will be produced.

Nigeria

Improved weather conditions and a decline in the problem of peanut rosette boosted Nigerian oilseed production in 1986/87. Total oilseed production for the area was forecast at 963,000 metric tons (MT), with peanuts making up 450,000 MT of the total. Although improved, peanut production is still below the levels produced during the 1970s, according to government officials.

Palm kernel, cottonseed and soybean output also rose. Palm kernel production reached 302,000 MT, cottonseed 46,000 MT and soybean 75,000 MT.

Nigerian crushers are looking more and more at domestic sources of oilseeds following the government's devaluation of the naira in 1986. Previous to the devaluation, foreign oilseed products were cheaper. Uncertainty over the quality and supplies of protein feed sources, particularly peanut meal, is also firing interest in improving domestic soybean availability. Demand, however, will far exceed supply because Nigerian growers had difficulty obtaining seed this year.

Soybean imports, set at 119,000 MT and up from 10,000 MT last year, may not be enough to keep facilities crushing at capacity.

Crushing facilities in northern Nigeria, which process mainly peanut, soybean and sunflowerseed, have been operating at less than 30% capacity. The entry of a new plant in Taraku will place additional demands on supplies. The Maize and Soybean Processing Co. Ltd. plant, scheduled to go on-line in June, has an annual crushing capacity of 72,000 MT of soybeans and 100,000 MT of corn.

Palm oil and palm kernel production may experience growth as local soap manufacturers continue their search for locally produced oils. An estimated 550,000 MT of palm oil was produced this year. Palm oil production remains largely traditional, but modern varieties are being introduced. Despite the ban on importing vegetable oils that went into effect in 1986, there has been a significant increase in the amount of refined palm oil entering from Asia. This has dampened demand for locally produced peanut oil.

The abolition of palm oil, peanut and cotton commodity boards in 1986 has stimulated trade activity and is expected to exert upward pressure on prices and production.

Norway

Soybean imports remain constant at 300,000 metric tons (MT) as Norway continues to import to meet domestic food oil demand. Fish oil imports, meanwhile, will increase to 80,000 MT in 1986/87 to counteract a shortage in domestic fish oil production.

Soybean oil production is maintained at levels to meet domestic demand; this year, 53,000 MT will be produced. Of this, 35,000 MT will be consumed as food, Norwegian industry will use 12,000 MT and 6,000 MT will be exported, most probably to Sweden.

Although consumption of soybean oil as food has remained somewhat constant, Norwegians are shifting away from margarine consumption and are eating more salad dressing and mayonnaise.

Higher prices for soybean meal may encourage Norwegian crush-

ers to increase crushing somewhat, but the upper limit will still be determined by the market for soybean oil. Meal levels are set at 239,000 MT this year, up 4,000 MT from last year.

This year's domestic consumption of fish oil is set at 135,000 MT, with 120,000 MT earmarked for industrial end uses. Production, however, is forecast at 90,000 MT due to a drastic decline in the Norwegian fish catch. To meet the demands of the fish oil processing industry, more oil will be imported from traditional suppliers such as Iceland, Denmark and the U.S.

Norway produces only one oilseed crop, namely, rapeseed. All of the 15,000 MT produced this year will be used domestically.

Pakistan

In 1986/87, a bumper 2.67 million metric tons (MT) cottonseed crop pushed total oilseed production to a record 3 million MT. Combined output for sunflowerseed and soybeans, both nontraditional crops, rose to 33,000 MT, while traditional crops such as rapeseed and mustard declined because the government offers no production incentives and these crops are often planted on marginal land.

Pakistan's strategy to boost oilseed production stresses the development of nontraditional crops such as soybeans and sunflowerseed. Several projects are under development. The Agricultural Development Bank of Pakistan is funding a project to produce soybeans, and the World Bank is providing funds for research and extension projects in the oilseed sector. Cargill Pakistan Ltd. has begun producing and marketing hybrid sunflowerseed and has asked for permission to build an integrated unit for crushing domestic sunflowerseed and soybeans.

Efforts also are under way to expand domestic rapeseed production. Under an agreement between Pakistan and the Canadian International Development Agency (CIDA), Canada would donate

\$13.5 million (in Canadian dollars) worth of canola oil (approximately 40,000 MT) to Pakistan and would assist the Agricultural Research Center in developing canola domestically.

Although the government is pushing expansion of nontraditional seeds, production increases are no match for edible oil demands. Increases in this year's oilseed output pushed edible oil production to 362,000 MT, three-fourths of it being cottonseed oil. Roughly 65% of Pakistan's oil needs will still be met with imports, including 490,000 MT of palm oil, 220,000 MT of soybean oil and 33,000 MT of canola oil. Next year, total imports will rise to 790,000 MT to offset a projected decline in the cottonseed crop. Total edible oil consumption is forecast to reach 1.2 million MT in 1988.

The government reportedly is interested in importing more soybean oil, but tight foreign exchange policy and the higher price of soybean oil relative to palm have been restrictive. Because the government is somewhat limited in how much it can buy, it is looking at ways to allow the private sector to import.

In anticipation of increased soybean oil imports, the government has lowered the palm/soy oil ratio for ghee from 65/35 to 60/40. Some processors say quality ghees should not contain more than 20% palm oil, but with palm oil prices running \$30-50 below soybean oil, private vegetable oil producers are using more palm oil.

Pakistan's total crushing capacity is slightly more than 4 million MT; only 500,000 MT of that capacity uses solvent extraction. Processors have expressed interest in importing more soybeans, but their antiquated plants are not set up to crush soybeans efficiently or to toast meal.

Peru

The resurgence of the Peruvian fishing industry, a driving factor in increasing the 1986 total oil supply, is expected to remain an important factor in 1987. Total oil

production is expected to reach 303,000 metric tons (MT) in 1987; of that, 250,000 MT will be fish oil.

Early predictions in 1986 said fish oil production would be limited to 130,000 MT and total oil production to 174,000 MT. Actual fish oil production reached 235,000 MT, and total oil production was 279,000 MT. The sharp recovery was due to the fact that the effects of El Nino, the ocean current whose periodic appearance disrupts fish supplies, were not as strong as expected. While there is some concern that El Nino might return, experts say it will not wreak havoc with the fishing industry as it did in 1983.

Cottonseed, the second most important oil source in Peru, is losing favor with growers because they receive better government price supports and credit for food crops. Agrarian banks cut credits to the cotton sector by 50% in 1986. The combination of lower credit and price supports as well as unfavorable weather conditions has caused forecasters to predict cottonseed production will not exceed 142,000 MT this year, 25,000 MT less than last year.

In an attempt to reduce imports of soybeans and soybean products, Peru has increased credit assistance and soybean support prices. Prices offered to growers last year were three times higher than previously, but growers in Tumbes, Amazonas, Cajamarca and San Martin continued to favor rice and produced only 2,000 MT of soybeans. The forecast for 1987 is set at 6,000 MT.

Imports of soybean and soybean products continue to rise to meet increasing consumer demand. Last year, 16,000 MT of soybeans, 73,000 MT of soymeal and 56,000 MT of oil were imported; 1987 levels are set at 20,000, 80,000 and 70,000 MT, respectively.

Although the government encourages palm and palm kernel production, these remain relatively unimportant oil sources in Peru.

The Philippines

Copra and copra product output will begin a downward cycle in the

Philippines this year following a period of drought. Copra production rose to 2.4 million metric tons (MT) last year, but will drop to 2.3 million MT this year and to 1.9 million MT in 1988.

Production declines will not be alleviated by coconut plantings. The Department of Agriculture (DA) and the Philippine Coconut Authority (PCA) plan to support the replanting of 80,000 to 114,000 hectares of existing copra land. Most of the land scheduled for replanting is land devastated by typhoons in the past two years or copra stands that are more than 60 years old. Both the DA and PCA have questioned the wisdom of expanding coconut area beyond present levels, given the volatile coconut oil market.

Funds for the replanting project are limited because the government no longer receives income from the export tax on coconut products. That tax was abolished last year. Possible funding from the U.S. through the World Bank has not been finalized. The Philippines and the World Bank have not been able to agree on conditions that would guarantee repayment of the proposed \$50 million loan.

Coconut oil, which represents 98% of total production, is forecast to decline to 1.43 million MT this year; of that, 1.1 million MT will be exported and 295,000 MT will be consumed domestically. This year's export level is based on the presumption that the European Economic Community's proposed fats and oils tax is not accepted.

Because the coconut market fluctuates often, the PCA is pushing for downstream industrial diversification within the Philippines. Increased use of coconut oil in the domestic production of coco-fatty alcohols, coco-fatty acids, stearine and glycerine is expected as government officials and coconut industry representatives become more concerned about coconut oil's market stability. A factor that may direct production of coco-fatty alcohols is the government's proposal to completely ban alkyl benzene, an ingredient in soap manufacturing. According to *The Cocomunity*, the plan could lead to

the domestic use of biodegradable coconut fatty alcohols as a substitute. This would use an additional 100,000 MT of coconut oil annually.

Palm oil production, which has been increasing steadily, is forecast to reach 38,000 MT in 1988. By then, it will make up 3.2% of total production and should meet domestic need. This year, 5,000 MT will be imported. By 1988, the only oil imports will be 12,000 MT of soybean oil.

Soybean production shows no signs of increasing; 6,000 MT will be produced in 1987 and 1988. Lack of funding for a seed production program, inadequate extension services and an inefficient marketing structure have been the major deterrents to increased production.

The domestic soybean requirement is about 20,000–25,000 MT; to meet demand, 10,000–15,000 MT must be imported. Most of the imported beans will be used as food. Currently, only one feed mill has any crushing capacity.

Significant increases in soybean imports for crushing depend on the reopening of the Phil-Asia soybean crushing facility that has been closed for three years. The government has tried to sell the plant as part of privatization efforts, but the private sector is reluctant to buy because the plant has deteriorated.

The National Science and Technology Authority plans to establish the country's first peanut and training research center in northern Luzon. Peanut production is approximately 50,000 MT per year, but domestic demand is rising.

Poland

Poland's record 1.3-million-metric-ton (MT) rapeseed crop is pushing Polish crushing facilities to the limit this year. The 1986/87 crop surpassed last year's record crop by 20%. The domestic crush is forecast at 732,000 MT, 18,000 MT short of the national crushing capacity.

Polish crushers expanded their crush capacity to 750,000 MT last

year with the modernization of an oilseed meal plant in Brzeg in southwestern Poland. Two more plants are scheduled for modification, which will increase capacity by an additional 200,000 MT per year. The government also has plans to build three new plants with a combined capacity of 450,000 MT by 1990. The first of the three plants is to be built in Szamotuly. The others will be built in Barczewo, near Olsztyn, and in Szczecin. The tender for the project ran until early July; a contract is expected to be signed by the end of 1987.

Rapeseed exports in the 1986/87 marketing year are forecast at 381,000 MT, with most going to West Germany. Yugoslavia, the Soviet Union and Hungary also buy from Poland. Poland began large-scale rapeseed exports after the 1984 harvest, and now rapeseed and its products have become an important hard currency source needed for the purchase of other vegetable oils and meals. Much of the pressure to improve crushing conditions in Poland is caused by processors who would like to export value-added rapeseed products instead of seed.

Although approximately 100,000 MT of soybeans were to be imported, Poland is not expected to import this year because it is unable to crush. Imports for this year include soy meal, 1.04 million MT; peanut meal, 200,000 MT; fish meal, 65,000 MT; soybean oil, 50,000 MT; fish oil, 20,000 MT, and linseed oil, 35,000 MT.

Soybean imports are likely to increase in 1988 because losses this past winter could lower domestic rapeseed supplies by nearly 37% in 1987/88.

Total oil production of 312,000 MT for 1986/87 is 15% higher than last year. Even with recent increases in rapeseed oil production and greater availability, vegetable oil consumption last year declined by 10% due to the scarcity of more popular vegetable oils.

The Polish government is trying to lower animal fat consumption and increase per capita vegetable oil consumption to 9.8 kilograms per year. Present per capita consumption is 7.9 kilograms of veg-

etable oil, 8.5 kilograms of butter and 7.1 kilograms of lard.

Soviet Union

The Soviet Union will quadruple meal imports while shifting away from oilseed imports in 1986/87. Meal imports, mainly soy, for this year and next are set at approximately 2.8 million metric tons (MT), four times the 1985/86 level of 683,000 MT. Total seed imports meanwhile will fall from 1.9 million MT in 1985/86 to 775,000 MT this year. Next year, 1.25 million MT of seed will be imported because soybean demand will be greater than domestic supply.

The change in the traditional buying pattern is partially attributed to the government's plan to increase livestock production. This year, the feed industry will consume nearly 8.2 million MT of meal, 1.27 million MT more than in 1985/86. There is the possibility that Soviet crushing facilities would not have been able to meet the added crushing load if more seed had been imported to meet demand.

Overall oilseed production reached an estimated 10.93 million MT in 1986/87, but is expected to fall to 10.64 million MT in 1987/88 due to delayed plantings this past spring. Sunflowerseed, which was planted three weeks late, is forecast to be down to 4.75 million MT next year from 5.26 million MT this year. Growers also have been having difficulty maintaining hybrid sunflowerseed quality.

Cottonseed levels will remain fairly constant: 4.6 million MT this year and 4.76 million MT next year. Cottonseed production remains dependent on fiber production rather than oilseed policies. Soybean production continues to rise as the government increases its support for the crop. Production for 1987/88 is expected to reach 750,000 MT; in 1985/86, Soviet soybean output was 480,000 MT. Even though rapeseed is becoming more important, USDA estimates that its production will be approximately 110,000 MT, with imports increasing to 250,000 MT.

In the competition for land, oilseeds still will come in second to grains, but the Soviet government is increasing production incentives. Starting with this year's crop, the government has raised oilseed procurement prices and instituted a bonus program. Farms that begin growing oilseeds this year will receive a 50% bonus for the first three years oilseeds are grown; bonuses of 50% also will be paid to farms for sales to the state that exceed the average for the eleventh Five Year Plan. If planned sales are fulfilled and they exceed the average for the eleventh Five Year Plan, growers will receive a 100% bonus.

The government also is increasing the amount of oilseed land on which intensive technology will be used. Intensive technology is meant to create higher yield through use of crop management and chemicals. This year, 42% of sunflowerseed area, 47% of rapeseed area and 100% of soybean area will undergo intensive technology.

Oil imports will increase slightly to meet the shortfall caused by the decline in seed imports. Approximately 810,000 MT of oil will be imported this year; 673,000 MT were imported last year. Any further growth in imports may be limited by foreign exchange constraints.

Total domestic food use consumption for oil is 3.28 million MT per year. The per capita oil consumption goal is 13.2 kilograms per person per year. In 1985, per capita consumption was 9.7 kilograms.

Spain

Spain, which imports more than two-thirds of the oilseeds needed to meet domestic demand, will increase soybean imports to 2.35 million metric tons (MT) this year, up 218,000 MT from last year. Small amounts of peanuts and sunflowerseed will bring total imports to 2.38 million MT. Overall demand for oilseeds is up because the meal/grain price ratio is favorable.

Meal demand has reached 3.3 million MT this year. Soybean meal makes up 85% of protein meal demand, while sunflowerseed represents 12%. The U.S. remains the principal supplier of soybeans, but near record crops in Latin America and the belief that South American soybeans are of a higher quality will enhance export possibilities from that region.

Soybeans have a zero duty rate; peanuts and sunflowerseed have a 3.3% import duty. Import permits are automatic for soybeans. While soybean imports are technically unrestricted, they are constrained by the requirement that all soybean oil produced in excess of domestic consumption quota must be exported. Spain also has a domestic tax on soybean oil use; revenue from the tax is meant to subsidize exports of surplus soybean oil.

Despite drought and reduced planted area, Spain's total oilseed crop reached 1.04 million MT, up slightly from last year, due mainly to larger sunflowerseed yields in central Spain. This year, 905,000 MT of sunflowerseed were produced; next year's crop is forecast at about the same level.

Sunflowerseed production has nearly tripled over the last 10 years due to lower costs and greater use of improved varieties; currently, 80% of the crop is from hybrid seed. Production, however, is limited by the EEC's production threshold of 1.2 million MT of sunflowerseed.

The soybean crop still falls far short of domestic need. This year, 3,000 MT will be produced; next year's forecast is 6,000 MT. Although the government subsidizes 50% of the certified seed costs, difficulties with soybean inoculation, absence of appropriate varieties and competition from corn and sunflowerseed have been deterrents to expansion. An Italian multinational corporation reportedly has expressed interest in promoting soybean production in Spain.

Rapeseed production remains low totaling 7,000 MT this year. Production is limited by competition from winter grains and pulses, agronomic problems and the

memory of the 1981 toxic rapeseed oil scandal. Rapeseed oil cannot be marketed as much in Spain.

Spain's total vegetable oil output is up to 1.27 million MT, slightly above last year's 1.1 million MT. The increase is attributed mainly to the 491,000 MT olive oil output, which increased by 94,000 MT over last year. Domestic use remains somewhat constant at 865,000 MT, and Spain will export 573,000 MT of oil.

Sweden

Swedish rapeseed production for the 1986/87 marketing year was set at 321,000 metric tons (MT), approximately the same as in 1985/86. Next year's crop is forecast to rise to 348,000 MT, an 8.5% increase, as more growers plant double-zero varieties.

Approximately 135,500 MT of next year's harvest will be of double-zero varieties such as Sonja. The Swedes stopped planting single-zero spring rapeseed varieties in 1986.

Nearly 246,000 MT of rapeseed will be crushed this marketing year; next year, that figure should reach 267,000 MT. Rapeseed meal demand has risen since 1985/86. Last year, 133,000 MT were produced, and 157,000 MT are expected to be produced next year. The continued demand for rapeseed meal will increase rapeseed oil production as well. In 1987/1988, oil production will reach 104,000 MT, up from 91,000 MT in 1985/86. Excess production will be exported.

Government and farm organizations have encouraged increased use of domestic feed raw material; this could lead to greater land use for oilseeds as farmers switch from grains because the costs of exporting the surpluses have become high. Soybean meal imports, meanwhile, have dropped from 138,000 MT in 1985/86 to 100,000 MT this marketing year and next.

In 1985/86, Sweden consumed 152,000 MT of fish and vegetable oils for food. However, domestic consumption for food use is expected to fall to 120,000 MT this marketing year and next.

Margarine production had declined for the third year in a row as butter/margarine mixtures gained market shares. Coconut oil and rendered fat also have become more important in margarine production. The marine oil share of raw materials dropped to 8.9%, from 14.9%, and rapeseed oil dropped one percentage point, to 18.7%.

Turkey

A record sunflowerseed crop and a 60% increase in soybean output are projected to push Turkey's oilseed harvest to 1.97 million metric tons (MT) in 1986/87, up from 1.64 million MT last year. Favorable weather and increased hybrid seed usage caused forecasters to raise the sunflowerseed estimate to 1.03 million MT, up 330,000 MT from last year.

The soybean harvest, set for 120,000 MT, is well above last year's 75,000 MT, but short of the government's projected 200,000 MT. Seed failure at germination and unfavorable weather conditions caused a decline in yields. The government continues to support credit and extension programs to encourage double-cropping of soybeans after the wheat harvest. Next year's crop is set at 200,000 MT.

Soybeans have improved both as secondary and primary cash crops; however, Turkey is unlikely to be self-sufficient in soybeans in the near future. In 1986/87, 20,000 MT of soybeans, 80,000 MT of oil and 50,000 MT of meal will be imported. The American Soybean Association (ASA) has said that increased soybean demand may occur following the publication of new recommendations to the Turkish poultry industry. The University of Ankara recently rewrote poultry feed guidelines to recommend that soybean meal be included in feeds at levels ranging from 37 to 38%.

Turkey will import 15,000 MT of cottonseed this year; official figures aren't available yet, but cottonseed output is expected to decline to 747,000 MT, from 810,000 MT.

Some vegetable oil producers are asking that oilseed import levels be raised as high as 100,000 MT—more than a 10-fold increase over last year's 7,550-MT level—to use underutilized facilities. Many plants designed for cottonseed and sunflowerseed have been modified to crush soybeans, and some companies have voiced interest in building a facility in Adana for soybeans.

Vegetable oil production totaling 675,000 MT is about 43% higher than last year, due mainly to increases in the sunflowerseed and olive crops.

Uruguay

Last year's increased export opportunities to Taiwan encouraged Uruguayan growers to double soybean hectareage to 50,000 hectares in 1987; next year, 70,000 hectares will be planted. In late April, Taiwan agreed to buy 70,000 metric tons (MT) of the 75,000 MT crop produced in 1987. Under the agreement, two shipments, at \$225.56/MT, left Uruguay in early June and late July.

To ease exports in the future, Taiwan is reportedly planning to build a 60,000-MT silo in Montevideo.

The purchase of most of the soybean crop left Uruguay with a potential oilseed shortage. To prevent this, the government authorized the crushing industry to import up to 40,000 MT of soybeans tax-free from July 1 through Dec. 31, 1987.

Production of sunflowerseed, the only other oilseed crop produced in Uruguay, declined in 1987. Last year, 80,000 MT were produced on 77,000 hectares. This year, an estimated 50,000 MT will be produced on 70,000 hectares. The nearly 37% decline in production is blamed on unfavorable weather, poor prices for growers and damage from birds. An estimated 25% of crop loss occurs on cropland near native forests that shelter birds.

No sunflowerseed is scheduled for export due to the small harvest and low oil content. Instead, 14,000 MT of sunflowerseed oil will be

produced for domestic consumption. An additional 4,000 MT of sunflowerseed oil will be imported.

Most of the oil crushing companies are heavily in debt with the Bank of the Republic. A soybean/rice bran oil processing plant is still awaiting financing by that bank, but it is doubtful the government will approve it.

Venezuela

Oilseed output, particularly sesame seed and cottonseed, is expected to expand as Venezuelan processors invest in domestic oilseed production. Processors have taken a more active role since the government instituted a policy in 1986 linking a company's import share of oilseeds and products to its purchases of domestic seed, total market share and financial support of production. Total output in 1988 is forecast at 95,000 metric tons (MT), compared to 76,000 MT in 1986. Output this year is expected to dip to 65,000 MT due to a decline in cottonseed.

Sesame remains the most important oilseed in Venezuela. Sesame seed production is forecast to be 80,000 MT in 1986/87, up 26,000 MT over last year, and is expected to rise another 20,000 MT next year. Expansion has been limited somewhat by a lack of certified seed and the inability of available varieties to adapt to growing areas.

Heavy rains early in the 1986/87 season pushed the cottonseed production forecast down to 37,000 MT, below an earlier projection of 70,000 MT. Last year's output was 57,000 MT.

An estimated 165,000 MT of soybeans will be imported this year as the government continues to give priority to oilseed (soybean) imports over products as a way to keep crushing facilities from idling, to generate more value-added products and to increase employment.

The oilseed investment/edible oil import policy is encouraging private investors to plant African palm despite public controversy over possible health risks from consuming palm oil. The long-term plan is

Feature

to plant 20,000 hectares capable of yielding 60,000 MT of palm oil, or about 20% of edible oil consumption.

Yugoslavia

Early forecasts predicted Yugoslavian oilseed production for 1986/87 would jump to 789,000 metric tons (MT), nearly a 50% increase over last year. The main factor has been the near doubling of the sunflowerseed crop projection from 233,000 MT in 1985/86 to 450,000 MT in 1986/87. The strong demand for sunflowerseed oil, the Yugoslavian oil of choice, and availability of varieties resistant to phomopsis encouraged growers to plant about 189,000 hectares this year. The 1987/88 long-range outlook anticipates 220,000 hectares will be planted, resulting in a harvest of 540,000 MT.

Like sunflowerseed, soybean production is also projected to increase this year and next due to reduced competitiveness of the corn crop and sharp increases in soybean yield. Forecast production of 225,000 MT in 1986/87 and 300,000-325,000 MT in 1987/88 will keep imports at 220,000 MT per year, down from 283,000 MT in 1985/86.

Increased seed production and high carry-overs will also lower oil imports to 36,000 MT, from 161,000 MT last year.

Besides the greater availability of domestic oilseed, imports also will be influenced by the government's higher taxes on imported oilseeds. Last June, the government imposed an extra import charge on 15 agricultural products as a way to encourage domestic production. That list includes soybeans, sunflowerseed and rapeseed,

but excludes protein meal. On Jan. 1, 1987, the government raised custom duties, increased the equalization tax from 8 to 10% and imposed an additional import tax of 1.5% on all imported commodities. The normal custom tariff remains at 6% for soybeans, 10% for sunflowerseed and 5% for rapeseed. The custom evidence remains at 1%. The change in the custom duties schedule pushed soybean import duties from 4% in 1986 to 18.5% this year.

The increases in duties may force importers to buy more soybeans under countertrade arrangements to prevent idling at the Zadar soybean plant.

Yugoslavia's 24 crushing plants are experiencing financial difficulties due to the controlled vegetable oil prices and increased production costs.

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The U.S. sunflower industry

The following are excerpts from a talk on the U.S. Sunflower Industry and Its Markets, given by Karl M. Schmidt of the National Sunflower Association at the 1987 AOCS annual meeting in New Orleans in May.

In a number of countries, consumers express preferences for certain vegetable oils. This preference is expressed in developed as well as developing countries. In Algeria, Egypt, Portugal and the Soviet Union, consumers prefer sunflowerseed oil. Central American countries have a traditional preference for cottonseed oil, although they are switching to sunflowerseed. In other countries, olive oil is preferred. These preferences, in turn, are a function of the type of food each country's consumers eat and the relative prices and availability of the oils.

In the U.S., sunflowers are grown chiefly in the Central Plains states. Production began in the Dakotas and Minnesota in the mid-1970s. Most of the production comes from North and South Dakota, but some is done in almost all states. In 1987, production interest also came from the Gulf states because of difficulty in profitably producing soybeans.

U.S. sunflower production has averaged about 1.4 million metric tons (MT) over the past several years. However, production has been steadily declining over the past three years. The March 15, 1987, planting intentions reported by the U.S. Department of Agriculture indicated that farmers would plant 1.7 million acres to sunflowers. Since that survey was taken, prices offered to the farmer have increased; consequently, the area planted will most likely be higher, equaling the previous year's production levels of about 2 million acres.

The most important factor affecting U.S. sunflower production is the price of sunflower relative to alternative crops. Every producer seeks to maximize profit by planting the crop that will result in the greatest sale. In the main sunflower-growing area of the north central

U.S., the principal competing crops are wheat, barley and oats. Unfortunately for sunflower, the prices of the major competing crops are determined by the federal government via its farm program, through target and loan prices.

Sunflower is a unique crop in the U.S. farm program, in that producers receive no subsidy or price guarantee. Sunflower producers plant what the market demands. The net effect has been to depress sunflower production.

U.S. agriculture is in a financially trying time, and farmers have been forced to grow crops that offer the most financial security. The major competing crops of wheat, feed grains and soybeans have the support of government assistance programs. Without any crop assistance programs, sunflower often would offer the most potential profit for U.S. farmers; it was this price fluctuation that attracted farmers to sunflower in the late 1970s. Currently, however, many farmers fear to plant sunflower without a government price guarantee.

U.S. crushing plants have the capacity to handle about 1.2 million tons of sunflowerseed. These plants also crush other oilseeds, so the effective capacity is about 985,000 MT. The three plants—Archer Daniels Midland's Redwing (Minnesota) facility, Cargill's Riverside (North Dakota) plant and National Sun Industries' Enderlin (North Dakota) plant—have the capacity to produce 395,000 MT of crude sunflowerseed oil. No oil refining is done at these plants. Additional crushing plants in the area have handled sunflowerseed in the past. Total crushing capacity could quickly be expanded to about 2 million MT. That level of crush could produce about 800,000 MT of oil annually.

Most of the sunflowerseed oil

produced is of the high-linoleic form. Some high-oleic sunflower also has been crushed in these plants.

U.S. sunflowerseed oil production has varied from year to year. Production reached 303,000 MT in the 1982/83 market year. Although sunflowerseed production was down in 1985/86 from the previous year, oil production was up. Oil production in 1986/87 is expected to match last year's level.

A number of factors affect U.S. sunflowerseed oil production. One is the considerable substitution among oils. Thus, the prices of palm, soybean, rapeseed and cottonseed oils affect the price, and consequently the production, of sunflowerseed oil.

The prices of competing oilseeds also affect oil production because much U.S. sunflowerseed is exported as whole seed. A strong world demand for sunflowerseed, or other similar oilseeds, will direct the seed to overseas customers, away from U.S. crushing plants. A case in point is Mexico, which until two years ago was a strong seed market. Seed was "bid away" from U.S. crushers and went over the Texas border to Mexican crushing plants. The resulting jump in prices pleased U.S. farmers but had a negative impact on the U.S. sunflower crushing and refining industries.

U.S. domestic demand for sunflowerseed oil has had limited effect on its production. The amount of oil that moves into the U.S. market is about one-half of production. U.S. demand is growing quite slowly, and thus might be said to be stable. Demand likely has not expanded because of a lack of consumer awareness, due to lack of promotion. Although most consumers are aware that sunflower exists as a plant or as an edible seed, few know about the high quality and availability of the oil.

Demand for sunflowerseed oil for the export market is the overwhelming factor in setting produc-

tion. U.S. crude oil exports reached 301,000 MT in the 1980/81 market year; exports last year were 205,000 MT, and exports this year could approach that level.

Oil exports to overseas buyers frequently are few in number but large in quantity. On several occasions (Algeria, 1981; Soviet Union, 1982; Mexico, 1983 and 1986), one-third to over one-half of the total U.S. annual sunflowerseed oil exports were done within a few months. Prices were significantly affected for a short time as a consequence. Domestic demand for sunflowerseed oil was negatively affected by the uneven movement of prices.

The future holds opportunity for sunflower. The development of high-

oleic varieties will enable the sunflower to compete in new and expanded food areas. The National Sunflower Association is working to remove trade barriers of tariffs and quotas and to expand consumer awareness in various countries. Positive farm-program legislation for U.S. sunflower producers appears more and more possible. Understanding of the limits and errors of past farm legislation is growing, and there is more willingness by public policy and budget decision makers to enact legislation that will result in U.S. sunflower producers being able to compete in more open and fair markets.

Every year, additional countries enter the market for sunflowerseed oil. North African and Caribbean

Basin countries are turning to sunflowerseed because of the increasing price of cottonseed oil. Growing U.S. demand will result from increased consumer awareness of the high quality of sunflowerseed oil. Biotechnology research holds considerable promise for the development of new hybrids.

However, price and quality competition among oils will continue to be the major focus, despite unique uses and properties of the oils. U.S. consumer concern about tropical oils will continue to increase, which will slow domestic demand for these oils. As a result, we are confident of a bright future for sunflower production in the U.S. and abroad.

Fats & Oils News

Highlights:

PUFA and eicosanoid research

The following report on the AOCS Short Course on Polyunsaturated Fatty Acids (PUFA) and Eicosanoids, held May 14-17, 1987, in Biloxi, Mississippi was written by J. Edward Hunter of Procter & Gamble. Hunter serves as JAOCS' Associate Editor for the News for Health and Nutrition.

The AOCS Short Course on Polyunsaturated Fatty Acids (PUFA) and Eicosanoids attracted approximately 300 participants, including about 100 from outside the U.S. The program was organized and chaired by W.E.M. Lands of the University of Illinois at Chicago; it consisted of both plenary and poster presentations describing current research in cardiovascular disease, lipoproteins, immune-inflammatory disease, membrane turnover, cancer, development and new clinical aspects. There also was a special poster session highlighting test materials available for biomedical research. This report summarizes presentations from each of the sessions.

Cardiovascular disease

In regard to cardiovascular disease, the key area of interest remains the apparent ability of diets high

in the omega-3 fatty acids eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) present in fish oils to reduce both thrombotic tendency and hypertriglyceridemia. Several presentations reviewed human epidemiological studies suggesting apparent cardiovascular benefits of consuming relatively large levels of fish and fish oils.

J. Dyerberg of Aalborg Hospital Horth, Denmark, noted that a death registry recently established for Greenland Eskimos has confirmed earlier reports that the Eskimos, whose diets are high in omega-3 fatty acids, have a lower mortality rate from coronary heart disease (CHD) than the Danes, whose diets are much lower in omega-3 fatty acids. A. Hirari of Chiba University School of Medicine, Japan, reported similarly that CHD mortality in a Japanese fishing village was much

lower than in a farming village. On the other hand, residents of a Norwegian fishing village studied by A. Nordoy of University Hospital of Tromso, Norway, were found to have a higher incidence of CHD than residents of an inland farming village. In view of this inconsistency with studies of the Eskimos, Nordoy commented that high fish consumption may not explain completely the reduced CHD mortality of certain fish-eating populations. He suggested that with respect to CHD risk, the balance of total fatty acids in the diet and in the body may be more important than the intake and body levels of individual omega-3 fatty acids.

Effects of fish oil fatty acids on development of atherosclerosis, which often predisposes individuals to heart attack, remain uncertain. B. Weiner of the University of Massachusetts Medical Center reported that cod liver oil, which is low in saturated fatty acids, is antiatherogenic in swine; however, fish oils high in saturates have not