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Malaysia is the world leader in the production of palm and palm kernel oils, and it is also the largest exporter of edible oils. Supplying about 12% of the fats and oils consumed worldwide, Malaysia has a major influence on the world oilseeds market. More recently, faced with low world prices for edible oils, government and industry officials have directed some of their efforts at value-adding activities in order to maintain Malaysia's economic well-being. This issue of the *Bi-weekly Bulletin* examines the situation and outlook for Malaysia's palmoil industry, and the implications for the world oilseeds sector.

#### **BACKGROUND**

#### The Economy

Since the 1970s, Malaysia's economy has gone through a major transformation. From one based mainly on exporting raw materials such as rubber and tin, it has evolved into one of the most diversified economies in southeast Asia. In recent years, Malaysia has focussed on exportoriented manufacturing and processing to fuel its economic growth. It has done so by exploiting the comparative advantages of a skilled and productive work force, a welldeveloped infrastructure, and a favourable currency exchange. Relative to the United States (U.S.) dollar, the Malaysian Ringgit (RM) has depreciated by about one-third during the past five years.

The agriculture, forestry and fishing sectors continue to be the backbone of Malaysia's economy. In 1970, those sectors contributed about one-third of the country's gross domestic product (GDP). Although that proportion has since decreased to about one-fifth of GDP, the sectors still provide employment for the majority of Malaysia's workforce.

In 1999, Malaysia recovered from its worst recession since gaining independence in

1957. The quick recovery is largely attributed to an export sector that, in addition to helping increase GDP by 5%, enabled the country to build up its financial reserves and to relax most of the capital controls that had been imposed by government during the Asian financial crisis of 1998. Although Malaysia's economic prospects are reasonably good for the short term, its longer term prospects may be limited if reforms in the corporate sector are not realized, particularly those with respect to improving competitiveness and dealing with high corporate debt.

#### **Palmoil**

The oil-yielding palm tree, or *Elaeis guineensis*, originated in West Africa and was introduced to Malaysia in about 1870 as an ornamental plant. By 1917 it was being cultivated on a commercial scale for some of its products. Currently, palmoil tree production occurs on about three million hectares (Mha), which is well over one-third of Malaysia's total cultivated area. The perennial crop is harvested throughout the year and the trees usually remain productive for 20 to 25 years.

On a per hectare basis, the palmoil tree yields more oil than any other plant, producing five and nine times as much oil

as groundnuts and soybeans, respectively. On average, a mature Malaysian plantation produces the equivalent of about 4 tonnes per hectare (t/ha) of crude palmoil, with some plantations yielding as much as 6 t/ha. A unique feature of the palmoil tree is that it produces two types of oil: palmoil from the outer layer (or flesh) of the fruit; and palm kernel oil from the seed or kernel. For every 10 units of palmoil produced, about one unit of palm kernel oil is produced.

The refining of crude palmoil in Malaysia began in the early 1970s in response to the government's call for increased industrialization. With the establishment of refineries, a wide range of processed palmoil products became available. Palmoil is used in numerous food and nonfood applications, but it is used primarily as an edible oil, and to make soap. After the oil is extracted from the outer layer of the fruit and refined, much of it is used as a cooking oil and to make shortening. It is also used to make margarine, vegetable ghee, and other such products.

In the world market for vegoils, palmoil has accounted for as much as 27% of production and 49% of exports during the past decade. During this period, global



production of palmoil has more than tripled. *Oilworld* predicts that palmoil could become the leading vegoil, ahead of soyoil, by 2012. This may be due in part to the fact that the palmoil market, unlike the soyoil market, is independent of the meal and protein market and, as such, it is insulated from some of the factors that affect the oilseeds market.

Palmoil has been very competitive in the edible oils market because of relatively low land prices, limited pest pressures, and cheap labour in countries such as Indonesia and Thailand. However, land prices are increasing and higher wages have eroded some of palmoil's comparative advantage, especially in more industrialized countries such as Malaysia. Another consideration is that, in addition to being very labour intensive, palmoil production is very susceptible to the long-term effects of severe weather occurrences such as typhoons.

The importance of the palmoil industry to the Malaysian economy was particularly evident in 1998 when total exports of palmoil and palmoil products reached a record RM 21.3 billion (CAN\$8.1 billion). However, with palmoil production at, or near, record high levels, Malaysian government officials and the industry have stepped up efforts to increase its consumption as a means of dealing with an oversupplied market.

Those efforts include educating the consuming public to the desirable properties of palmoil. For instance, food

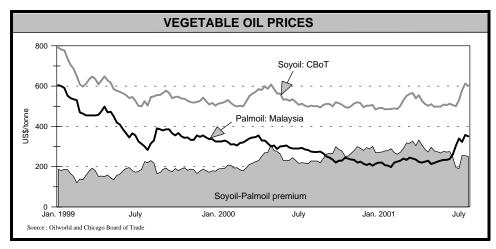
# MALAYSIA: PALMOIL SUPPLY AND DISPOSITION

October-September	1999	2000	2001
crop year	-2000	-2001e	-2002f
	r	million ton	nes
Carry-in Stocks	1.2	1.3	1.2
Production	10.5	<u>12.1</u>	12.6
<b>Total Supplies</b>	<b>11.8</b>	<b>13.4</b>	<b>13.8</b>
Consumption <sup>1/</sup> Exports <sup>2/</sup> Total Use	1.5	1.5	1.7
	<u>8.9</u>	10.7	<u>11.1</u>
	<b>10.4</b>	<b>12.2</b>	<b>12.8</b>
Carry-out Stocks	1.3	1.2	1.0

- 1/ includes exports of further processed products and refining losses and is therefore higher than the actual level.
- 2/ excludes palm and fatty acid distillates.

e: estimate, f: forecast, August 2001

Source: USDA



manufacturers generally use palmoil because it has distinct characteristics, requires little or no hydrogenation, and prolongs the shelf life of the prepared food products for which it is used. Food manufacturers also find palmoil more cost effective than using polyunsaturated oils to achieve the same results because polyunsaturated oils require more processing and their unit cost is usually higher. Like other edible fats and oils, palmoil is easily digested, and absorbed in normal metabolic processes. It therefore plays an important role in meeting energy and nutritional needs in many regions of the world.

On the other hand, Malaysia's attempts to use crude palmoil as fuel in some of its larger power plants have been, for the most part, unsuccessful. Malaysia's Primary Industries Ministry is now encouraging smaller generating facilities to use a mix of

refined palm olein and diesel to power their plants. A fuel additive based on palmoil has also been developed that, when added to diesel fuel, increases engine power and fuel economy, and reduces black smoke emissions. To further increase consumption of palmoil, a crankcase lubricant has been developed that lasts up to six times longer than most products currently in use.

#### **Competition in the Palmoil Market**

The second largest producer of palmoil in the world is **Indonesia**. Since 1995-1996, production has increased by about 60%, to a record 7.3 million tonnes (Mt) in 2000-2001 which is attributed mostly to large investments from outside sources looking to capture the economic advantages of Indonesia's cheap labour.

Africa is also a major producer of palmoil. For 2000-2001, Nigeria, Ivory Coast, Cameroon, and Ghana are expected to produce a total of 1.3 Mt of palmoil, of which about 10% will likely be exported. The major exporting country is Ivory Coast, which exports about one-third of its annual production.

The tropical weather of some **South American** countries is also conducive to palmoil production, and yields are generally comparable to those in southeast Asia.

Colombia, Ecuador, and Brazil produce about 750,000 tonnes (t) of palmoil annually, but their ability to compete is constrained by relatively high labour costs, compared to the major producers in Asia. Therefore, instead of trying to compete with the low-cost producers, Brazil has concentrated its efforts on niche markets such as that for organic food products.

In terms of domestic consumption, Brazil uses about 120,000 t of palmoil annually, one-third of which is imported. Gessey Lever, a leading Brazilian manufacturer of margarine, mayonnaise, detergents and other products derived from palmoil is reported to pay about US\$60 per tonne (/t) to bring palmoil from the refinery in Belém, Brazil, versus US\$45/t to bring it in from Malaysia. Furthermore, because palmoil can easily be contaminated during handling, and because Brazilian refiners do not have the same processing, handling, and testing facilities as those available in Malaysia, it is often advantageous to import palmoil from Malaysia.

Palmoil production in **Latin America** is relatively low, but it is important because much of that production is exported. For 2000-2001, its major palmoil producing countries - Costa Rica, Honduras, and

Guatemala - are expected to export half of their combined annual production of 285,900 t.

### A Comparison of Dietary Fats and Oils

Palmoil is a popular food preparation ingredient and, like all vegetable based oils, contains no cholesterol. However, there are other edible oils which also have desirable properties, particularly in terms of health benefits. Canola oil, for example, contains the lowest level of saturated fat of any edible oil. It also has the second highest level of monounsaturated fatty acid, or oleic acid, which is recognized for its ability to reduce blood cholesterol levels. Canola oil has the highest level of desirable alpha-linolenic acid (Omega-3 fatty acid).

#### **SITUATION 2000-2001**

#### **Production**

In order to remain competitive in the world market for edible oils and fats, Malaysia is considering an ambitious palmoil replanting scheme. Malaysia's Department of Agriculture estimates that the average age of about one-third of its palmoil trees is 20 years, which means that many of these trees are nearing the end of their productive life. Given the recent oversupply of edible oils on the world market, the Department is encouraging the replacement of about 150,000 ha of the aging palmoils annually.

In addition, plans are underway for 50,000 ha of new plantings per year. The replanting scheme is aimed at helping Malaysia meet future demand for edible

oils, particularly since replanting enables palmoil growers to take advantage of the higher-yielding plants that are now available. With real prices for edible oils on the decline for several decades, palmoil producers have continuously had to improve productivity in order to remain competitive.

For 2000-2001, Malaysia's palmoil production is estimated at a record 12 Mt, up from 10.5 Mt in 1999-2000. For 2000-2001, yields are forecast to decrease marginally, but harvested area is estimated at 3.2 Mha, an increase of about 8% from the previous year. Malaysia's record production is attributed largely to an estimated 19% increase in production in the Sabah and Sarawak regions, while production in the West Malaysia region is expected to increase only marginally from 1999-2000.

#### Trade

China and India are
Malavsia's most important

customers for its exports of palmoil. According to the Malaysian Palm Oil Promotion Council, China accounts for 13% of world oils and fats production, and 15% of world consumption. During the past couple of years, China had switched from importing oil to importing soybeans, a move that pressured world prices for oils and fats. However, in July 2001, China announced that it was granting up to 700,000 t more in quotas for palmoil imports, which is expected to provide significant price support for the world oils and fats market.

India, on the other hand, has been pressured by its oilseed farmers to cut down on imports of edible oils, and has increased import duties by 75% on cash crude palmoil (CPO), and 45% on soyoil.

#### **Prices**

CPO prices have increased from the average of 700 RM/t in February 2001 to, more recently, the 1200 RM/t (CAN\$487/t) level. This is still considerably less than previous years' prices such as the record price of 2377 RM/t in 1998. Malaysian palmoil prices recently increased by 18% in one week, due largely to the announcement that China would increase their quota on palmoil imports.

#### **OUTLOOK 2001-2002**

### World

For 2001-2002, world supplies of **vegoils** are forecast to be at a record high due largely to record soybean crops forecast for the U.S. and Brazil. However, with consumption of oils and fats forecast to increase by 3%, carry-out stocks are expected to be at their lowest level since 1997-1998.

There are economic factors that may lessen the magnitude of the increase in world consumption of oils and fats. World population growth for the 12 month period ending June 2002 is estimated at 1.27%, but per capita consumption of oils and fats tends to be very low in the countries contributing to most of that population growth. Oilworld estimates that per capita consumption ranges from 7.0 kilograms (kg) in Bangladesh, to 18.8 kg in Pakistan. In China and India, it is estimated at 14.6 kg and 12.1 kg, respectively. Another consideration is that the increase in world GDP (forecast by the International Monetary Fund at 3.4% for 2000) may be offset by significant increases in the prices of oils and fats.

## WORLD: PALM OIL PRODUCERS 1998 1999 2000 -1999 -2000 -2001f

-1999 -2000 -2001f .....thousand tonnes..... Malaysia 9,759.1 10,491.9 12,114.0 6,784.0 Indonesia 5,920.0 7,330.0 Angola 49.5 49.0 49.0 Benin 33.6 35.4 37.4 Cameroon 146.0 156.6 161.3

Ghana 110.0 108.5 111.0 Ivory Coast 280.6 277.0 273.4 735.1 747.5 Nigeria 712.6 Sierra Leone 38.0 40.7 46.0 Congo Dem Republic 98.5 97.3 96.2 1,468.8 1,499.6 1,521.8 Africa 109.4 Brazil 90.6 105.1 Colombia 466.0 512.6 544.0 Ecuador 236.1 248.0 254.0 Peru 34.8 37.3 38.8 Venezuela 64.7 77.1 83.0

Papua/New Guinea 256.6 300.0 301.0 122.6 Costa Rica 118.6 123.0 Dominican Republic 25.5 26.0 23.8 Guatemala 61.3 69.9 50.5 Honduras 91.4 93.4 90.6 24.6 33.2 Mexico 17.5 Nicaragua 8.0 8.2 8.0

892.2

468.0

11.2

320.2

980.1

561.0

11.6

345.6

1,029.2

530.0

11.8

364.9

 Other
 273.1
 296.0
 325.0

 Total
 19,358.0
 21,258.2
 23,516.0

f: forecast, July 2001 Source: Oilworld

Panama

Latin America

**South America** 

**Thailand** 

There is concern that higher commodity prices will lessen the use of vegoils for biodiesel production, but major fuel consumers such as the U.S. and the European Union are committed to expanding the use of fuel from renewable sources. The United States Department of Agriculture (USDA), for instance, has announced that its agencies will use biodiesel and ethanol fuels in their fleet vehicles "where practicable and reasonable in cost." This includes the purchase of fleet vehicles designed to run on renewable fuels, and the construction of storage and dispensing facilities for renewable fuels.

Finally, there is the question of how much more world stocks of vegoils can be reduced. In the past ten years, the lowest stocks-to-use ratio (S/U) for vegoils was 9%, and this was recorded in 1997-1998. For 2001-2002, the S/U is forecast at 7.6%, but it must be noted that the figure reflects the increased use of just-in-time delivery methods which help customers keep lower inventories of vegoils.

World supplies of **palmoil**, which represent about one-quarter of the total supply of vegoils, are forecast to be record high for 2001-2002. World production of palm oil is forecast at 24.7 Mt, an increase of about 1.0 Mt, which is considerably less than the year-to-year increases of about 2.1 Mt for the previous three crop years. Increased consumption of palmoil is expected to more than offset increased production, and carry-

out stocks of palmoil will be reduced accordingly.

In **Malaysia**, after three years of high production, palmoil yields are expected to decline in 2001-2002 as palm trees recover from a stressful period. A downward trend in the biological yield as the trees are harvested past their prime, and the effects of reduced fertilizer use, are the major contributors to the decline in palmoil yields. However, increased harvested area and young palmoil trees nearing fruit bearing age will offset the lower yields of the mature and ageing trees. As a result, production is forecast at 12.6 Mt, up from 12.1 Mt in 2000-2001.

In Indonesia, which is the world's second largest producer of palmoil, production is expected to decrease in 2001-2002.

Among the factors contributing to the decrease are: ethnic unrest, which has affected harvesting and security at plantations; low palmoil prices and high input costs which have affected the amount of fertilizer used; and the economic crisis which delayed the construction of refineries and held back improvements to the country's transportation infrastructure. Indonesia's palmoil production for 2001-2002 is expected to be lower than the record 7.3 Mt crop forecast for 2000-2001.

#### Trade

For 2001-2002, world trade in oils is forecast at 35.3 Mt, up 2% from 2000-2001.

China is expected to increase imports of vegoils to keep up with increased consumption, despite a forecast for increased domestic production. The increase in imports is contrary to the trend that developed during the past decade when China's consumption of vegoils increased by about 25% while domestic production increased by about 45%, lessening its dependence on imports.

India's new import duties will restrict the ability of palmoil producers to maintain market share in India in 2001-2002, unless palmoil remains at a significant discount to soyoil, which it has been since the mid-1990s.

#### **Prices**

For 2001-2002, world prices for all vegoils are expected to

strengthen due largely to a reduction in the S/U, which is at the lowest level in several years. The price leaders for this category are palmoil and soyoil, but rapeoil and sunoil are also influencing the market. With a forecast for lower carry-in stocks for all four major oils, demand rationing will likely be achieved with higher prices.

On that basis, *Oilworld* has forecast **palmoil** prices at US\$350/t, an increase of over 30% from 2000-2001. For 2001-2002, the USDA August estimate for **soyoil** prices is in the US\$0.165-0.195 per pound range, with the mid-point of that range showing a 27% increase over the 2000-2001 price.

Canola oil prices closely follow Chicago soyoil prices and are also expected to increase significantly. This influence is reflected in Agriculture and Agri-Food Canada's price forecast for canola for 2001-2002, which is in the range of CAN\$345-375/t, up from CAN\$285-295/t in 2000-2001.

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### WORLD: VEGOILS\*

SUFFLI AND DISFUSITION				
October-September crop year	1999 -2000	2000 -2001e	2001 -2002f	
	r	million tonr	nes	
Carry-in Stocks	7.4	8.1	7.6	
Production	85.8	88.2	90.5	
Imports	31.4	33.9	34.8	
Total Supplies	124.6	130.2	132.9	
Disappearance	83.7	87.8	90.7	
Exports	32.8	34.6	35.3	
Total Use	116.5	122.4	126.0	
Carry-out Stocks	8.1	7.6	6.9	
Stocks-to-Use Ratio (%)	9.7	8.7	7.6	

\* includes soyoil, palmoil, sunflowerseed oil, rapeoil, cottonseed oil, coconut oil, peanut oil, olive oil, and palm kernel oil.

Note: The difference between imports and exports is attributed to the timing of delivery.

e: estimate, f: forecast, August 2001

Source: USDA