USDA Foreign Agricultural Service
GAIN Report
Global Agricultural Information Network

Required Report - public distribution

Date: 8/3/2011

GAIN Report Number: MY1006

Malaysia

Biofuels Annual

2011

Approved By:
Chris Rittgers
Prepared By:
Raymond Hoh

Report Highlights:
High feedstock prices, trade restrictions from importing countries, and subsidized supplies from other biofuel producers are inhibiting the developing Malaysian bio-fuel industry. The year 2011 has been pessimistic for Malaysia's bio-diesel exports and a further reduction is expected in 2012. The Government of Malaysia has started to implement the B5 mandate (a blend of 5 percent palm methyl esters in diesel) in stages within the country, but domestic consumption is not expected to increase sharply in the near term.

Post:
Kuala Lumpur

Executive Summary:
With palm oil prices hovering above RM3,520/MT (US$1,170/MT), the Malaysian biodiesel industry is struggling. Although the Government of Malaysia (GOM) has started to implement the B5 mandate (a blend of 5 percent of palm methyl esters in diesel) in stages, domestic consumption is not expected to increase sharply in the near term.

On the international front, Malaysia's biodiesel will not be able to compete without huge Government subsidies. In addition, the United States' Renewable Fuels Standards 2 (RFS2) has effectively eliminated palm oil as a feedstock for biodiesel in the States.

Opportunities for US exports of biofuel or a biofuel feedstock to Malaysia are limited as the country already has palm oil as a plentiful raw material. Also, retail petroleum/diesel prices in Malaysia are subsidized, diminishing the economic viability of importing biofuels as an alternative fuel source.

Jatropha, a tough bush with oil bearing fruit has excellent small-scale potential but needs more research before it can be cultivated on a larger-scale area. The shrub grows on marginal and arid land and needs little care. *Jatropha* is non-edible, so using it avoids the food vs fuel controversy. Although funds have been allocated to facilitate research and development of the crop, the GOM has yet to fully endorse the cultivation of jatropha.

Exchange Rate: US$1= RM3.013 (Jun 1, 2011)

Author Defined:
BIO-FUEL POLICY

Policies supporting production and use of biofuels

With palm oil prices hovering above RM3,520/MT (US$1,170/MT), the Malaysian biodiesel industry is struggling to survive. Without Government subsidies, Malaysian biodiesel will have difficulties competing in overseas markets with biodiesel from Thailand, Indonesia, the Philippines, Argentina and Colombia.

In the current political atmosphere of reducing public debt brought on by the huge expenses of subsidies, it is considered imprudent to increase subsidies. In fact, it is would be counter-productive to reduce palm oil exports at the current high prices and then subsidize the same amount for domestic usage as biodiesel. Based on a market price of RM3,500/ton for palm oil, the subsidy for a full implementation of the mandatory blend of 5 percent of palm methyl esters in diesel (referred to as B5) could probably amount to more than RM400 million (US$133 million).

The GOM has started to implement the B5 mandate in stages. Currently B5 biodiesel is available at only some of the Petronas (National Petroleum Company) stations and a few others in the Federal

Territory of Putra Jaya, Malacca and Negri Sembilan. A few more states will be added in the future. They are charging the same price as subsidized petroleum diesel.

In Malaysia, the biodiesel industry has to reckon with some of the lowest fuel prices in the region. The GOM sets retail fuel prices below the market price and compensates retailers through subsidies. The GOM cancelled the sales tax on retail petroleum products to alleviate price pressure and the incidence of the sales tax borne by the retail customer. The sales tax on diesel of US$0.05 per liter was dropped in October 1999, while that for gasoline of US$0.16 per liter was eliminated in June 2004.

Table 1:
Retail Price of Motor Fuels in Malaysia (per liter)

	Subsidized Retail Price	Without Subsidies or Sales Tax Exemptions
Gasoline*	US$0.63 (RM1.90)	US$1.09 (RM3.28)
Petroleum Diesel	US$0.60 (RM1.80)	US$1.02 (RM3.08)

*RON95
US$1=RM3.013 (Jun 1, 2011)

Plants built in EU before Jan 23, 2008 are exempt from the greenhouse gas (GHG) emission requirements as they are assigned the default value of 35 percent saving through 2013. Palm Oil Methyl Ester (PME) exports may continue to enter the EU as long as they are certified under a sustainability scheme.

PME has effectively been banned as a feedstock for biodiesel in the U.S. since the implementation of its 'Renewable Fuels Standards 2 (RFS2)' in July, 2010. There were no PME exports to the U.S. during the first 6 months of 2011.

BIO-FUEL MARKET SITUATION

Potential consumption of biofuel

The following tables represent Post's estimates of motor vehicle numbers in Malaysia. Registered vehicles from 1996 to 2010 were assumed to represent the current number of motor vehicles in use. Post estimates that diesel vehicles account for about 5 percent of the motor vehicle population in Malaysia.

Table 2:
#Number of New Motor Vehicles Registered from 1996 to 2010

Motorcycles	Cars	Buses Taxis Hire & Drive Cars	Goods Vehicles	Others	Total
5,031,481	5,787,163	109,997	474,360	260,881	11,663,882
43.14%	49.62%	0.94%	4.07%	2.24%	100%

Source: Malaysia Road Transport Department
Update: Jun 1, 2011

The Malaysian Automotive Association (MAA) forecasts total industry volume of motor vehicles to show a 2 percent growth in 2011 after a surge in sales in 2010. Table 3 forecasts a steady growth till 2015.

Table 3: Malaysian Automotive Association (MAA) Forecast of Vehicle Sales

	2010	**2011***	**2012***	**2013***	**2014***	**2015***
Passenger vehicles	543,594	555,000	560,000	566,500	574,000	581,000
Commercial vehicles	61,562	63,000	64,000	64,500	65,000	66,000
Total industry volume	605,156	618,000	624,000	631,000	639,000	647,000
Growth	12.7%	2.1%	1.0%	1.1%	1.2%	1.3%

*Source: MAA **forecast*
Update: Jun 7, 2011

With the lack of clear direction of the biodiesel sector at the current moment, Post does not foresee a growth in diesel vehicles in the near future. The annual road tax that drivers must pay has always been significantly greater for diesel motor vehicles. One reason that diesel engines were originally taxed more heavily is because their engines were considered to release comparatively more harmful emissions into the environment. Table 4 illustrates the difference in road tax between the petrol engine versus the diesel engine.

Table 4: Road Tax in Peninsula Malaysia 2011

Engine Capacity (c.c.)	**Petrol Engine**	**Diesel Engine**

1000 and below	US$6.64	US$6.64
1001-1200	US$18.25	US$36.51
1201-1400	US$23.23	US$46.47
1401-1600	US$29.87	US$59.74
1601-1800	US$66.51-US$92.93	US$133.02-US$185.86
1801-2000	US$93.10-US$126.12	US$186.23-US$258.88
2001-2500	US$126.62-US$292.07	US$259.61-US$623.96
2501-3000	US$292.90-US$706.94	US$625.95-US$1,619.65
3001-5000	US$708.43-US$3,694.00	US$1,623.23-US$8,788.58

US$1=RM3.013 (Jun 07, 2011)
Update: Jun 7, 2011

Biofuel Production

Ethanol production

Ethanol production is commercially insignificant in Malaysia. There is an opportunity for ethanol production from oil palm biomass but the technology is yet to be commercialized. Ethanol consumption is unlikely as retail gasoline prices are subsidized.

Biodiesel production in the biofuel sector

For most of the first half of 2011, biodiesel production was at a standstill. Most players are unable to maintain operations due to the high cost of feedstock. Some plants operate sporadically depending on purchase orders and are able to withstand closure because they are supported by their parent companies.

With the implementation of the B5 mandate in only a few states in the central region of the Peninsula, domestic consumption is not expected to take off sharply. Post expects the total production to reach about 13,000 MT for the whole of 2011 and 15,000 MT for 2012.

With the violent swing of palm oil prices, the GOM has started to look at a promising alternative feedstock, *Jatropha*. It has excellent small-scale potential but needs more research before it could be cultivated on a larger-scale area. The GOM has allocated funds to facilitate research and development of the crop. The Malaysian Palm Oil Board is tasked to carry out performance tests on *jatropha*-based biodiesel. The Malaysian Rubber Board is to engage in seed breeding and the National Tobacco Board is to gauge the suitability of cultivating *jatropha* on bris soil in the northern part of the country. A few private companies are planning to invest in *jatropha* cultivation, but the impact on the biofuel sector would not be significant in the next two years.

Table 5:
BIODIESEL PLANT REGISTRATED IN MALAYSIA 1/

1	AJ Oleo Industries Sdn. Bhd.	Segamat, Johor

2	AM Biofuel Sdn. Bhd.	Pasir Gudang, Johor
3	Carotino Sdn.Bhd.	Pasir Gudang, Johor
4	YPJ Palm International Sdn. Bhd.	Pasir Gudang, Johor
5	Malaysia Vegetable Oil Refinery Sdn. Bhd.	Pasir Gudang, Johor
6	Nexsol (Malaysia) Sdn. Bhd.	Pasir Gudang, Johor
7	PGEO Bioproducts Sdn. Bhd.	Pasir Gudang, Johor
8	Vance Bioenergy Sdn. Bhd.	Pasir Gudang, Johor
9	Mission Biofuels Sdn. Bhd.	Kuantan, Pahang
10	Mission Biotechnologies Sdn. Bhd.	Kuantan, Pahang
11	Plant Biofuels Corporation Sdn. Bhd.	Kuantan, Pahang
12	Carotech Berhad (Chemor Plant)	Chemor, Perak
13	Carotech Berhad (Lumut Plant)	Setiawan, Perak
14	Lereno Sdn. Bhd.	Setiawan, Perak
15	Man Jang Bio Sdn. Bhd.	Port Klang, Selangor
16	Intrack Technology (M) Sdn. Bhd.	Rawang, Selangor
17	Sime Darby Biodiesel Sdn. Bhd.-Carey Island	Pulau Carey, Selangor
18	Sime Darby Biodiesel Sdn. Bhd.-Panglima Garang	Teluk Panglima Garang, Selangor
19	FIMA Biodiesel Sdn. Bhd. (Titian Asli S/B)	Port Klang, Selangor
20	Weschem Technologies Sdn. Bhd.	Batang Kali, Selangor
21	KLK Bioenergy Sdn. Bhd. (Zoop Sdn. Bhd.)	Shah Alam, Selangor
22	Future Prelude Sdn. Bhd.	Port Klang, Selangor
23	Innovans Bio Fuel Sdn. Bhd.	Port Klang, Selangor
24	Global Bio-Diesel Sdn. Bhd.	Lahad Datu, Sabah
25	Green Edible Oil Sdn. Bhd. (Green Biofuels)	Sandakan, Sabah
26	SPC Bio-diesel Sdn. Bhd.	Lahad Datu, Sabah
27	Platinum Biofuels Sdn. Bhd.	Seremban, Negeri Sembilan
28	Senari Biofuels Sdn. Bhd. (Global Bonanza)	Kuching, Sarawak

Sources: MPOB: BIODIESEL PLANT IN OPERATION IN MALAYSIA

Table 5 shows the biodiesel projects currently registered in Malaysia but a majority is not operating.

Import Regime for Biofuels

There is currently no import tariff in Malaysia directly levied on biofuels. There is no import tariff on crude palm oil but there is a 5 percent duty levied on processed palm oil. There are no duties on two common biofuel feedstocks: rapeseed oil and sunflower oil. There is however a 5 percent tariff on soybean oil and its fractions.

Post has done revisions to the PSD Table as we obtain more accurate data from Governmental source. The BTN Trade code 382490900 (other chemical Products) contains a lot of chemical other than palm oil diesel.

BIOFUEL STATISTICS

Biodiesel production/consumption/trade (1,000 M Ton)					
	2008	2009	2010	2011	2012
Biodiesel					
Beginning stocks	7	20	15	4	3
Production 1/	195	222	80	13	15
Imports	0	0	0	0	0
Total supply	202	242	95	17	18
Exports	182	227	90	12	10
Consumption	0	0	1	2	4
Ending stocks	20	15	4	3	4

1/ One ton of Palm Oil has a 94% yield in term of methyl ester output.

Exports Trade Matrix

COUNTRY	**2009**
	Quantity (Tons)
European Union	119,277
U.S.A.	39,594
Singapore	38,821
Indonesia	23,005
Taiwan	5,571
South Korea	530
Kenya	498
India	114
Japan	47
Australia	0
Hong Kong	0
South Africa	0
China	0
TOTAL	**227,457**

COUNTRY	2010 Quantity (Tons)
Indonesia	45,072
European Union	40,660
U.S.A.	3,482
South Korea	180
Taiwan	159
India	47
Japan	7
Singapore	2
Australia	0
Hong Kong	0
South Africa	0
China	0
Kenya	0
TOTAL	**89,609**

Sources: MPOB