

POTS EGYPT 2010

***MALAYSIAN PALM OIL FOR EGYPTIAN
MARKET***

BY

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MALAYSIAN PALM OIL COUNCIL





Introduction to Malaysian Oil Palm Industry

Oil Palm Tree with Fruit Bunches



Oil Palm – Fresh Fruit Bunch



Basic Facts

- Fruits per bunch: 1000 to 3000
- Bunch Weight: 15-25kg
- Fruit size: 5 cm
- Fruit shape: Oval
- Fruit Color: Yellowish Red
- Fruitlet weight: 10 gm

Anatomy of Oil Palm Fruit

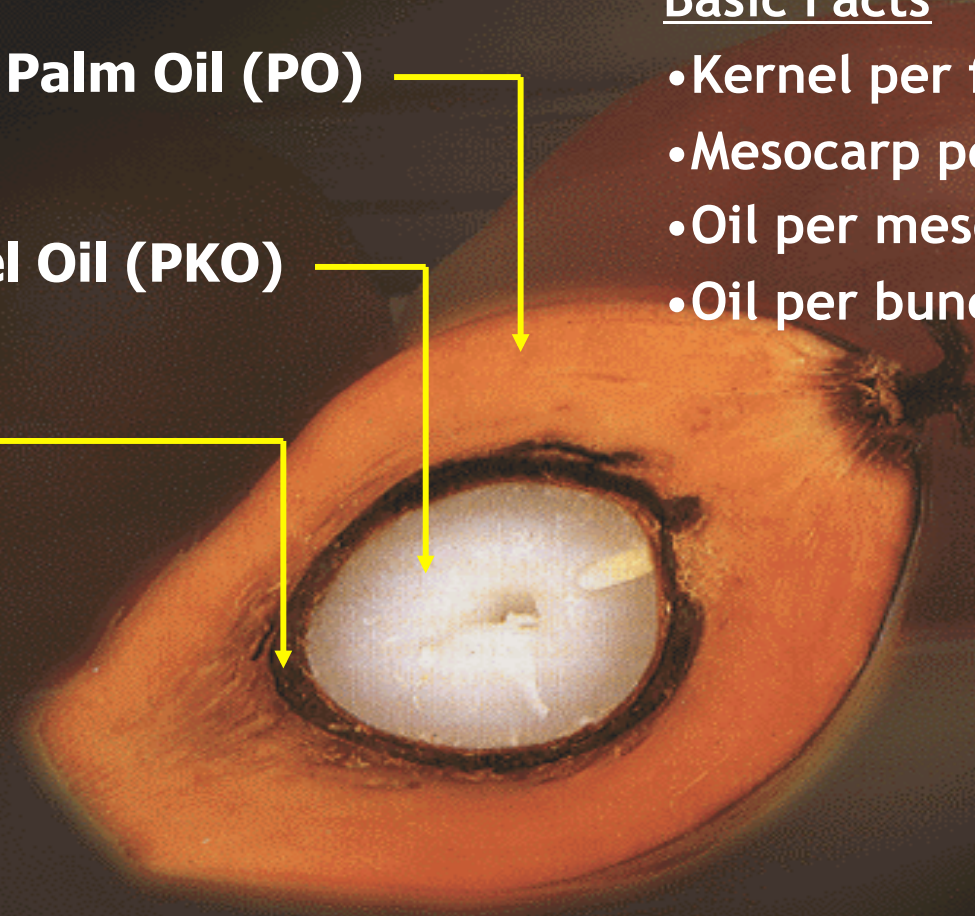
Mesocarp: Palm Oil (PO)

**Kernel:
Palm Kernel Oil (PKO)**

Shell

Basic Facts

- Kernel per fruit: 5-8%
- Mesocarp per Fruit: 85-92%
- Oil per mesocarp: 20-50%
- Oil per bunch: 23-25%



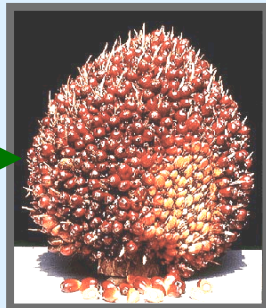
Abundance of Oil Palm Biomass



10% oil
90% biomass



OIL PALM FRONDS



FRESH FRUIT BUNCH



Lumber



PALM KERNEL CAKE



SHELL, 5.5%



EMPTY FRUIT BUNCH, 22%



FIBRE, 13.5%



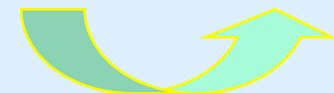
Crude Palm Kernel Oil



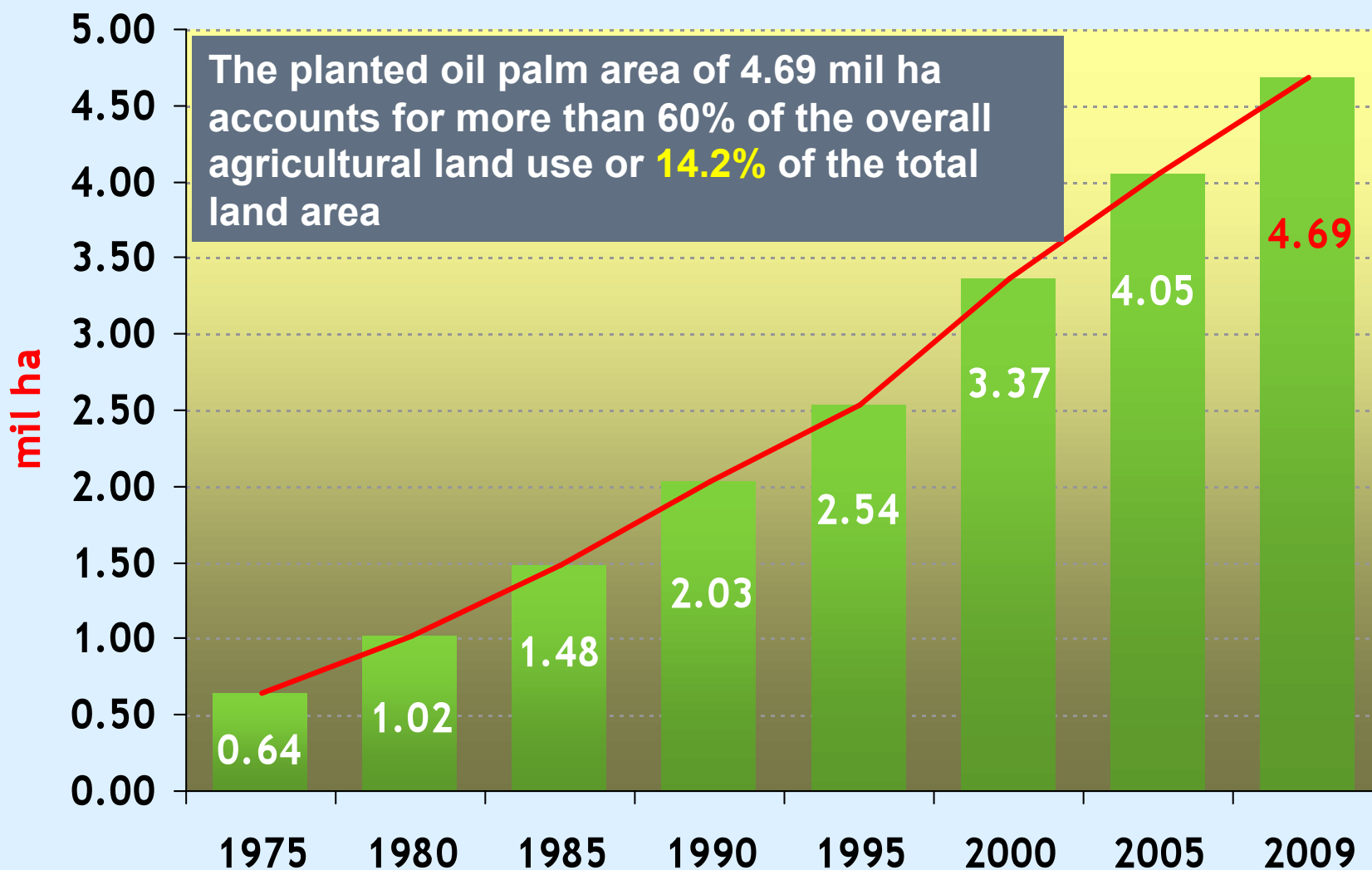
Crude Palm Oil



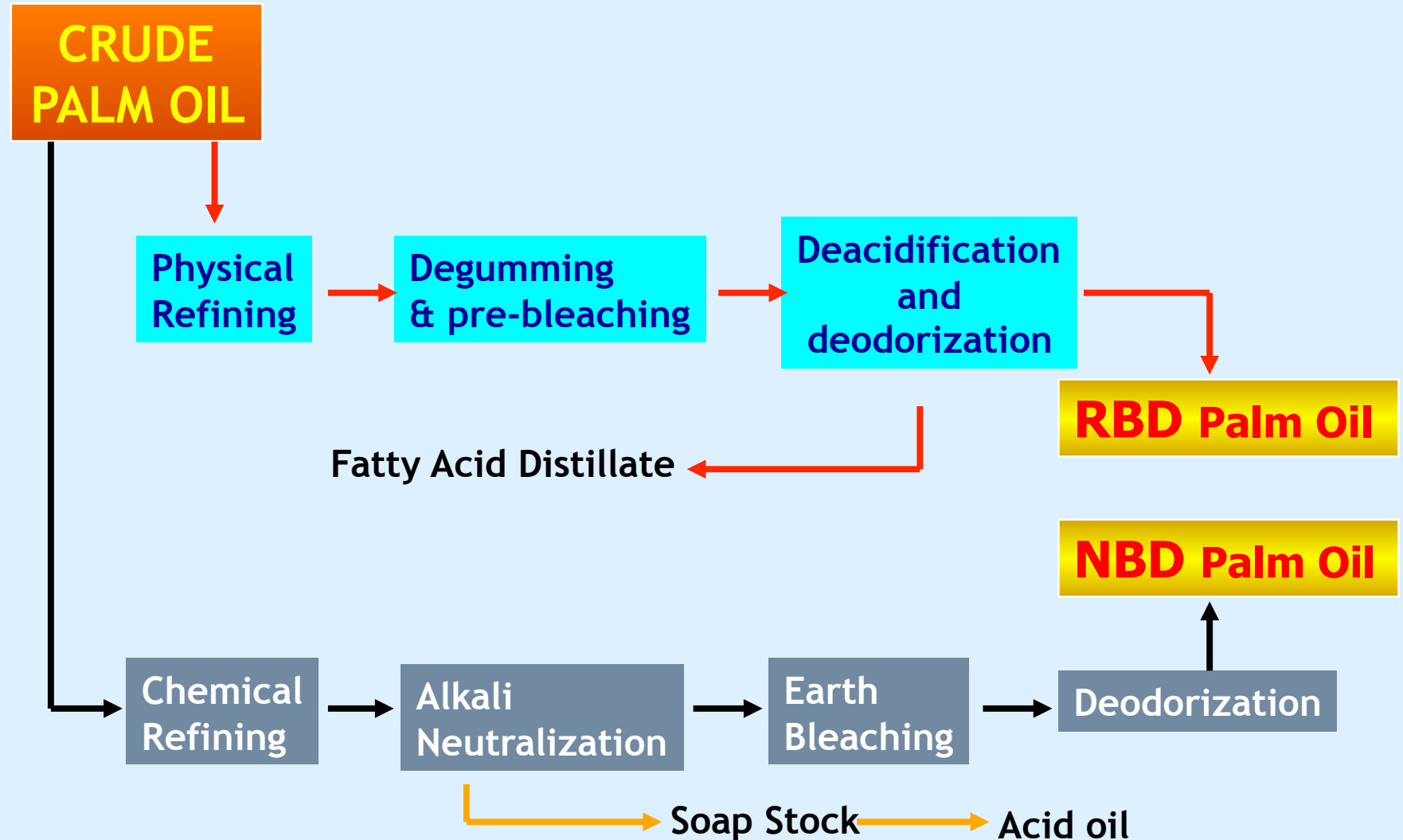
POME



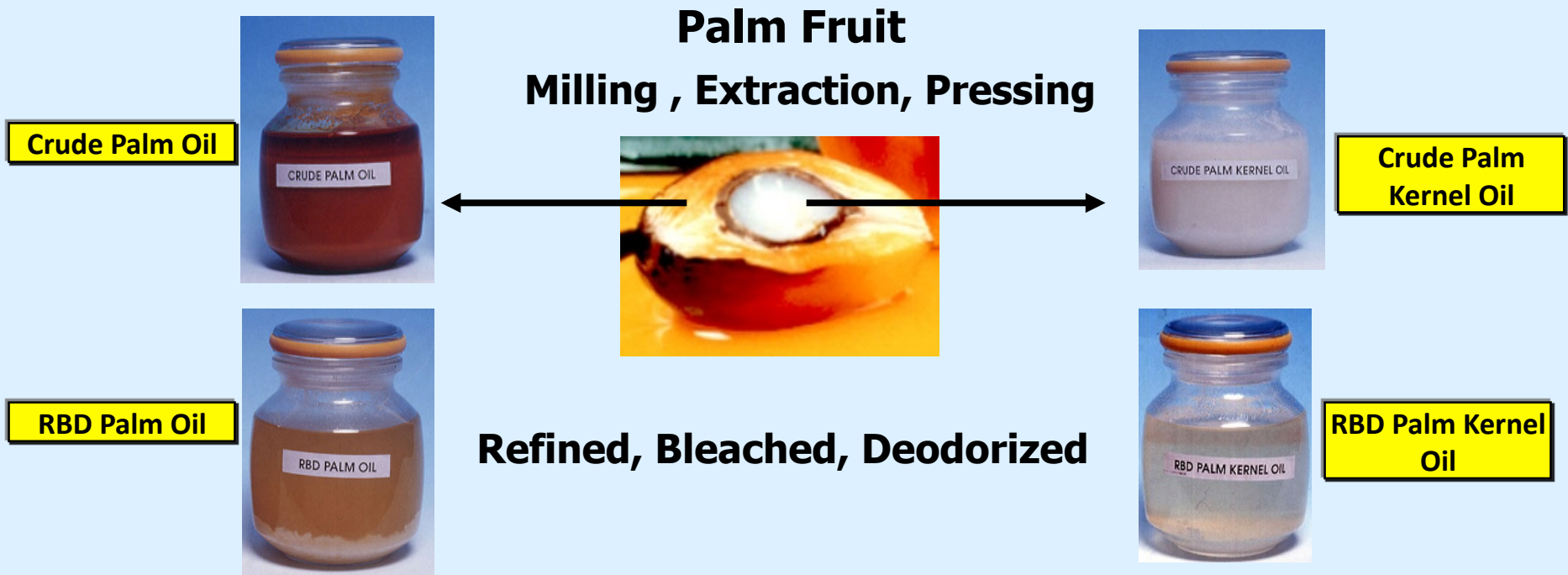
Overview of Malaysian Palm Oil Industry



Refining of Crude Palm Oil



Malaysian Palm Oil Products



Fractionation Process



RBD Palm Olein

RBD Palm Stearin

Fractionation Process



RBD Palm Kernel Olein

RBD Palm Kernel Stearin

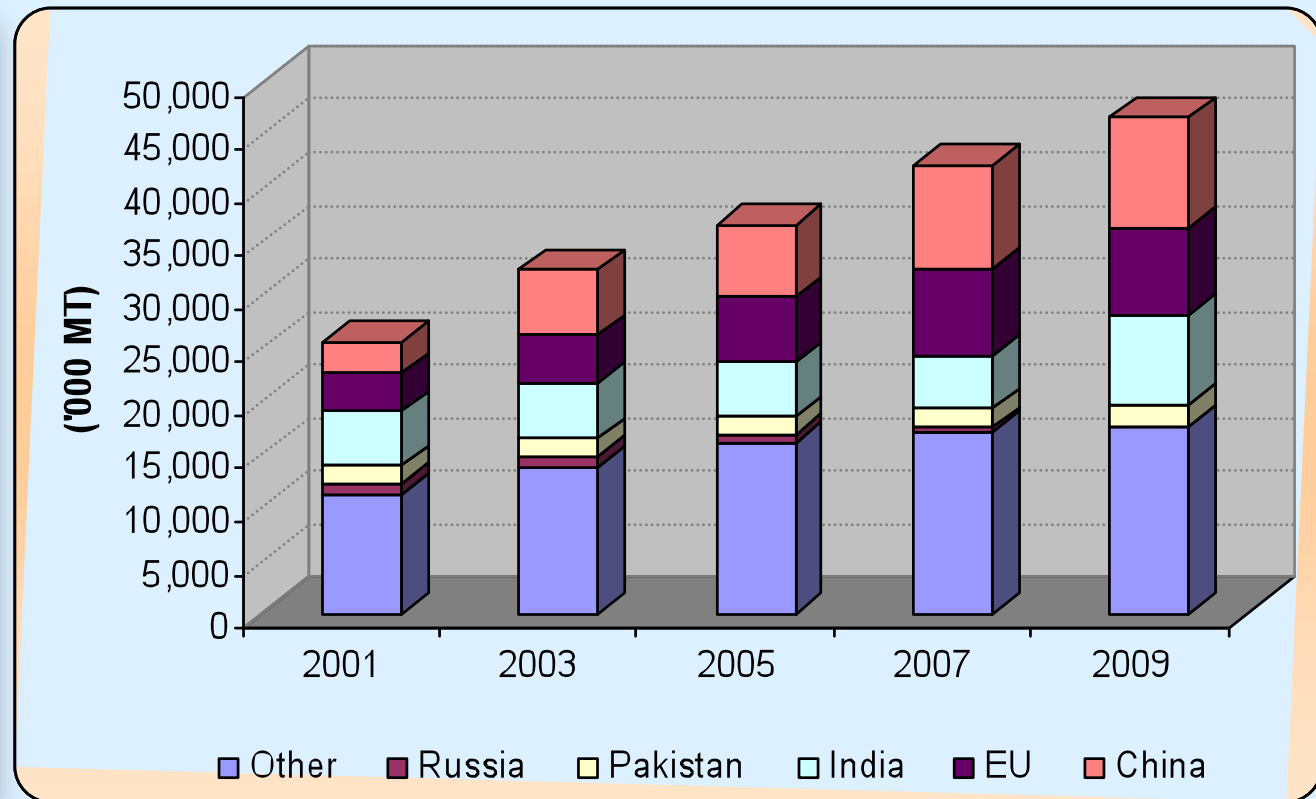
Global Oils & Fats Scenario

World Net Importing Countries

- Most countries are net importers, including the US since 2006.

- Developed countries e.g. in the EU with ambitious bio-diesel programmes & future targets are already major net importers of oils and fats – even when the bio-diesel industry has not yet taken off in a big way.

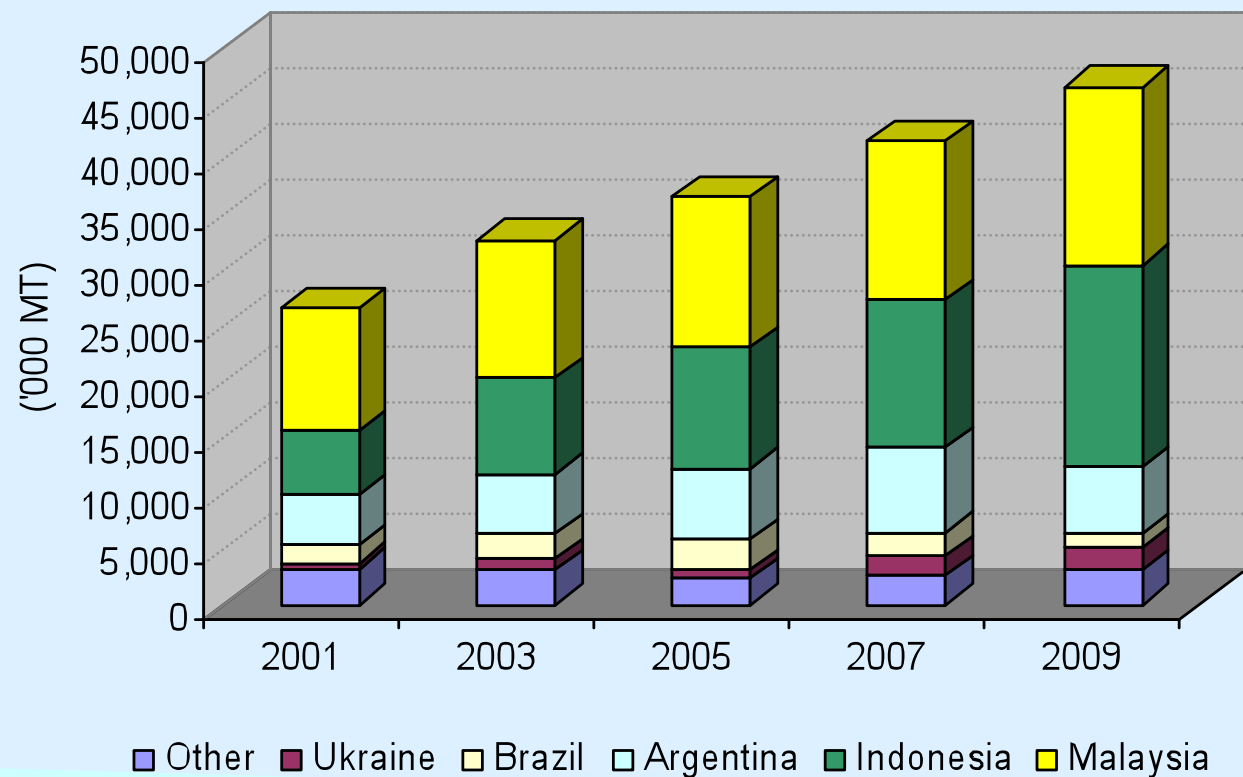
- China at the same time also seen its reliance on imported oils & fats increasing over the years. In fact, its oils & fats import grew at the fastest pace among the importers.



World Net Exporting Countries

• *Very few countries are in a position of nett excess to supply oils & fats to the world market.*

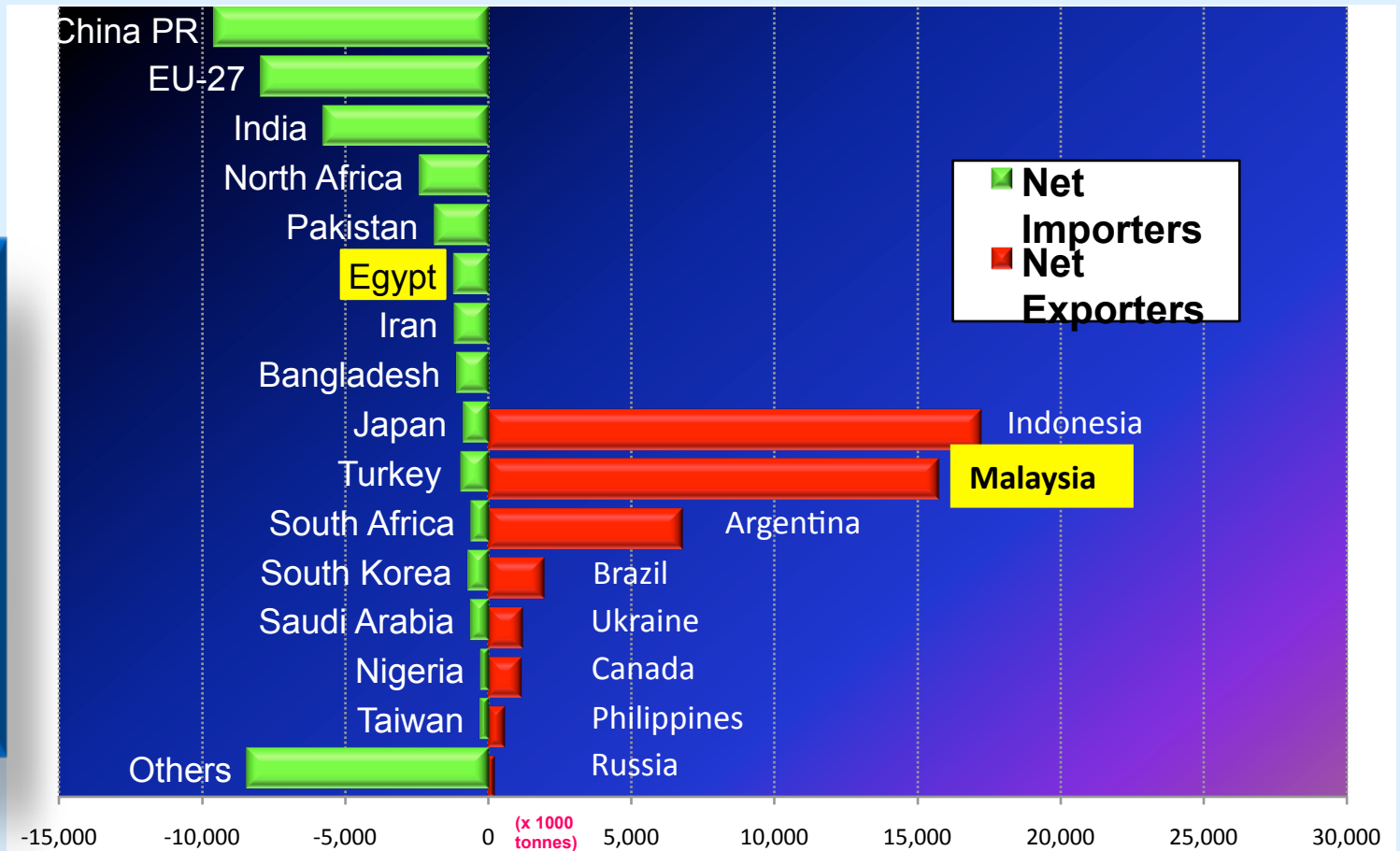
• *Most of these exporting countries also supply to China including Malaysia.*



Net Importing & Exporting Countries for Oils & Fats (2009)

• Malaysia, Indonesia & Argentina – are major net exporters of oils and fats.

• These also help in fulfilling food security for many countries in the world.



Source: Oil World

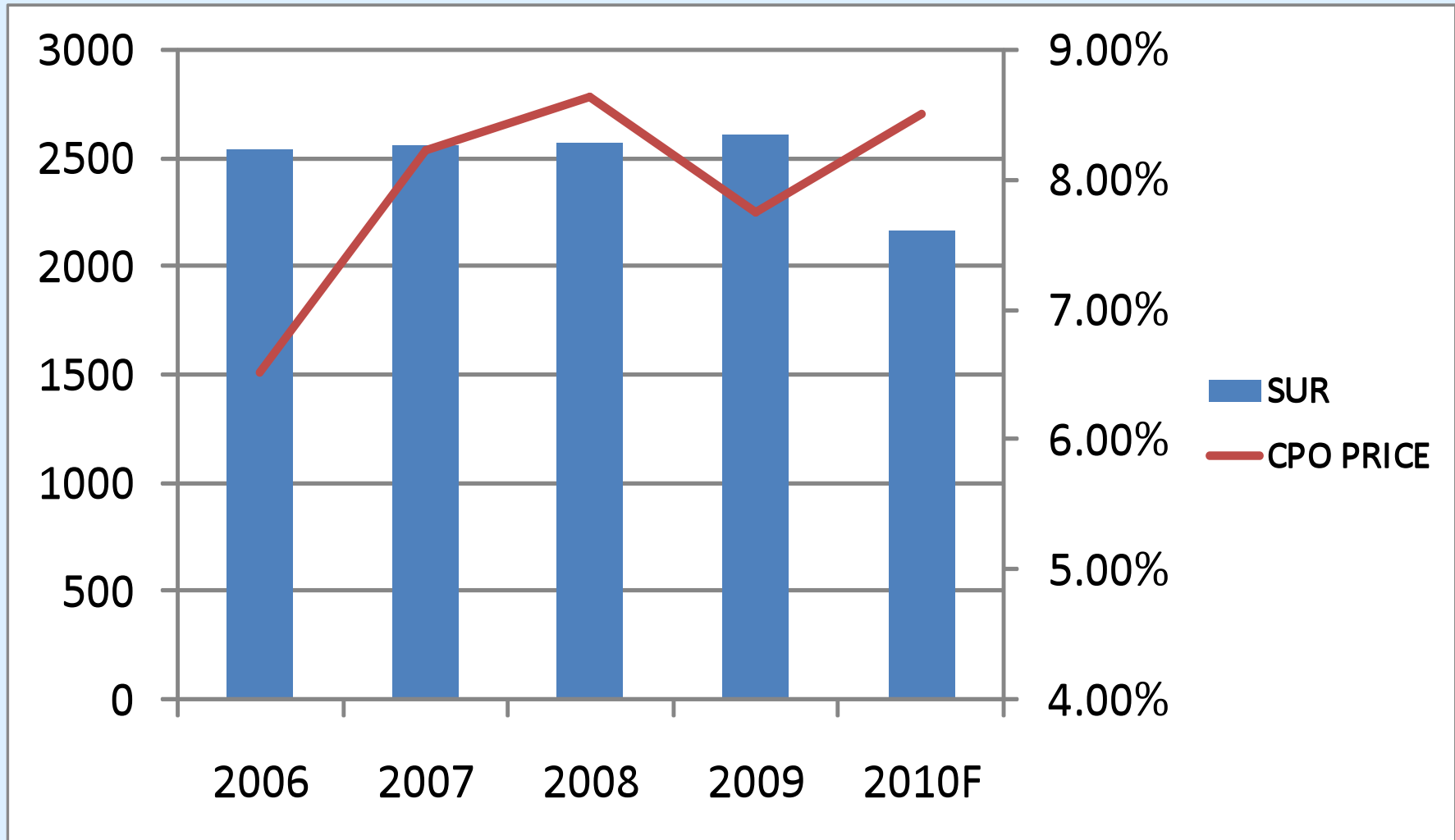


M P O C

Global Oils & Fats Supply and Demand

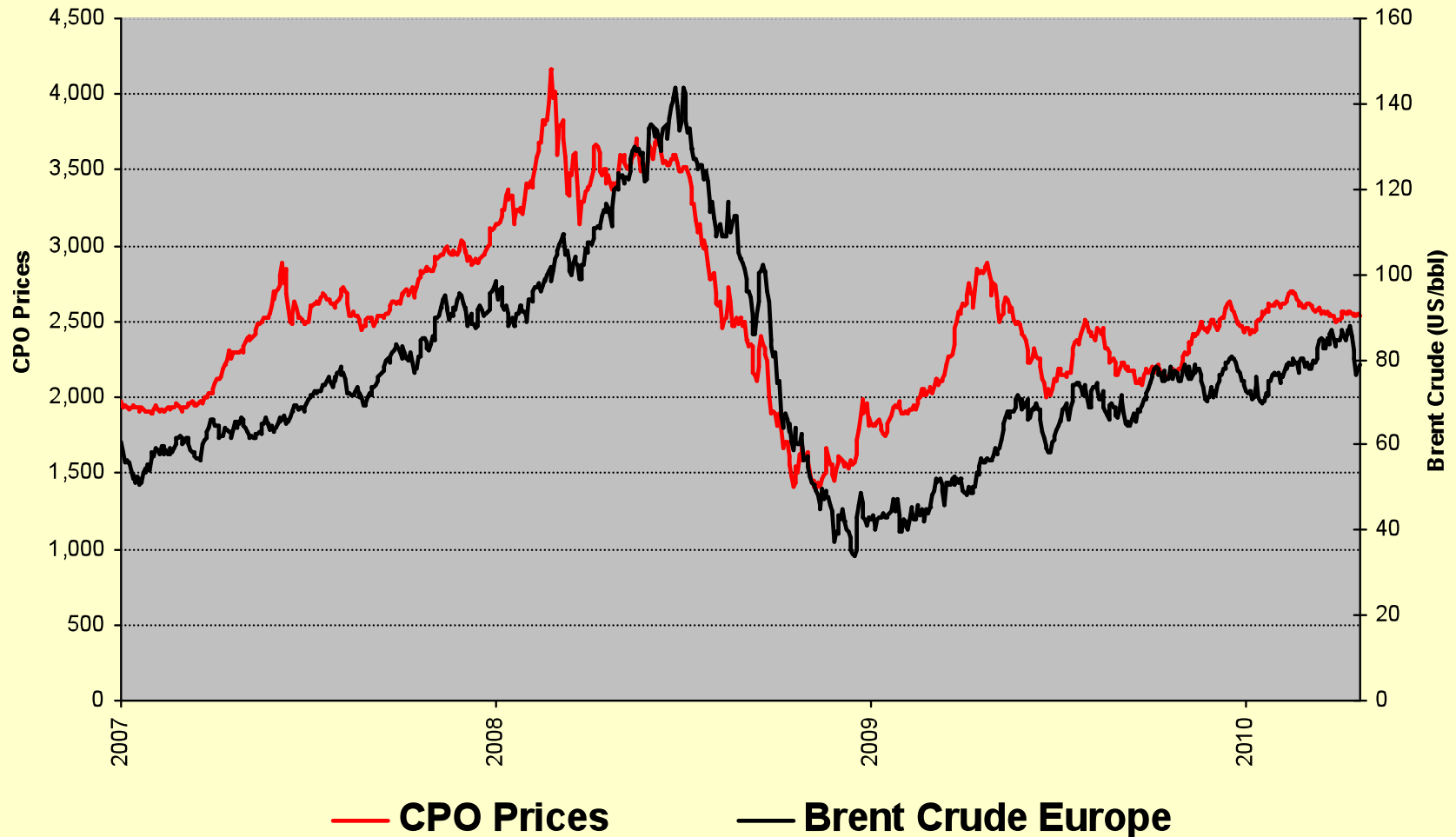
('000 MT)	2006	2007	2008	2009	2010F
Opening Stock	15,222	16,425	16,970	17,772	18,316
Production	147,152	151,338	157,266	160,545	164,400
Import	53,103	54,647	57,928	59,541	61,231
Export	56,778	57,354	59,917	61,966	64,397
Consumption	142,550	148,100	154,524	157,576	162,720
End Stock	26,425	16,970	17,772	18,316	17,268
Stock Usage Ratio	8.24%	8.26%	8.29%	8.34%	7.60%

Stock Usage Ratio vs. CPO Price



Palm Oil Price vs. Crude Mineral Oil Price

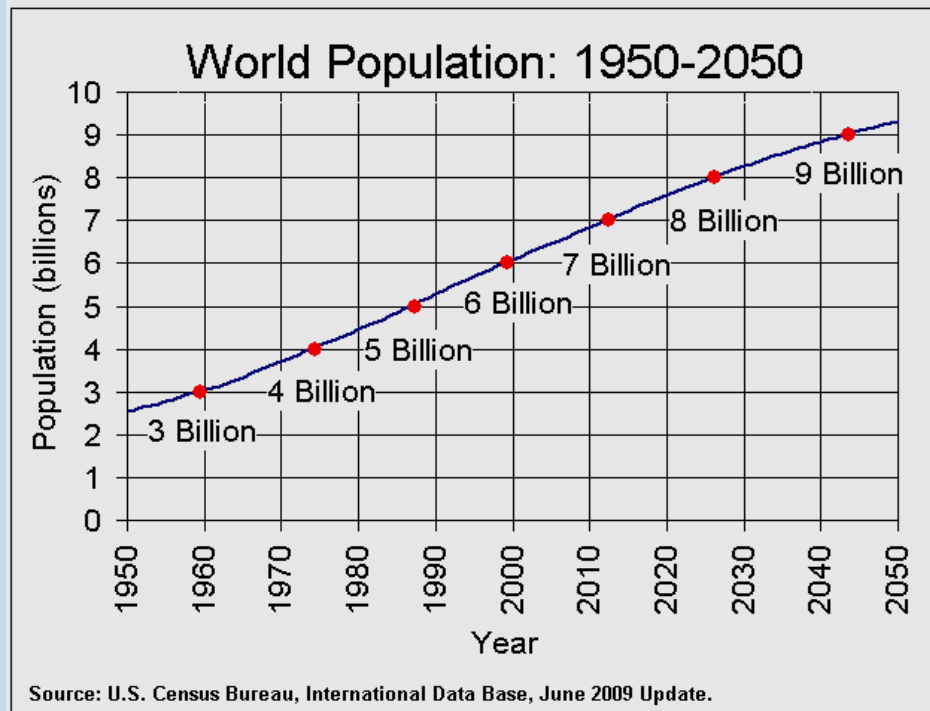
CPO, fob Malaysia vs Crude Oil, Brent (2007 - May 2010)



DEMAND

Future demand of palm oil is not only driven by growth in demand for food and oleochemicals brought about by population and economic growth but also higher needs for environmental friendly products such as biofuel

World Population: 1950-2050



The world population is projected to grow from 6 billion in 1999 to 9 billion by 2043, an increase of 50 percent.

More Demand from Biodiesel Industry

(million. MT)	2006	2007	2008	2009	2010F
EU-27*	4.85	5.95	7.49	8.42	9.55
USA	1.13	1.70	2.69	1.80	2.10
Argentina	0.05	0.18	0.74	1.16	1.60
Brazil	0.06	0.36	1.03	1.40	2.00
Colombia	0.00	0.01	0.04	0.19	0.35
Thailand	0.02	0.05	0.37	0.53	0.65
Turkey	0.33	0.10	0.06	0.03	0.05
Other	0.68	1.17	1.90	2.39	2.86
TOTAL	7.12	9.52	14.32	15.92	19.16
% Change	+98.3%	+33.7%	+50.4%	+11.2%	+20.4%

Requirement of biodiesel in EU will increase to 20 million MT when 10% mandatory inclusion of biofuel by 2020 being implemented

Need to Use Land Wisely

Year	World's population (bil)	Arable land per capita ($\times 10^{-3} \text{km}^2$)	Arable land per capita (ha)
1922	2.0	7.50	0.75
1975	4.0	3.75	0.38
2005	6.6	2.27	0.23
2030	8.0	1.88	0.19
2042	9.0	1.67	0.17

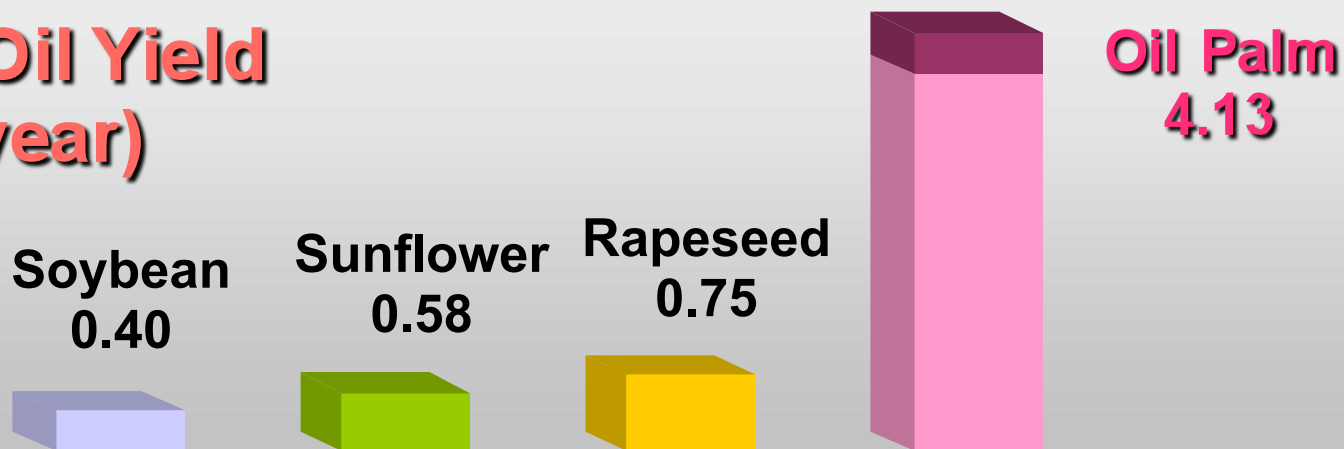
Source: Freeworld Academy & University of Michigan

- World's population increasing
- Limited land resource decreasing



Oil Palm vs. Other Oilseed Crops

Average Oil Yield (t/ha/year)



Oil Crop	Production (mil tonnes)	% of Total Production	Average Oil Yield (t/ha/year)	Total Area (mil ha)	% Area
Soybean	35.81	23.67	0.40	97.97	42.74
Sunflower	12.97	10.19	0.58	24.59	10.73
Rapeseed	21.34	16.77	0.75	31.32	13.66
Oil Palm	50.33^a	37.99	4.13	12.18	5.31
TOTAL^b	132.48			229.20	

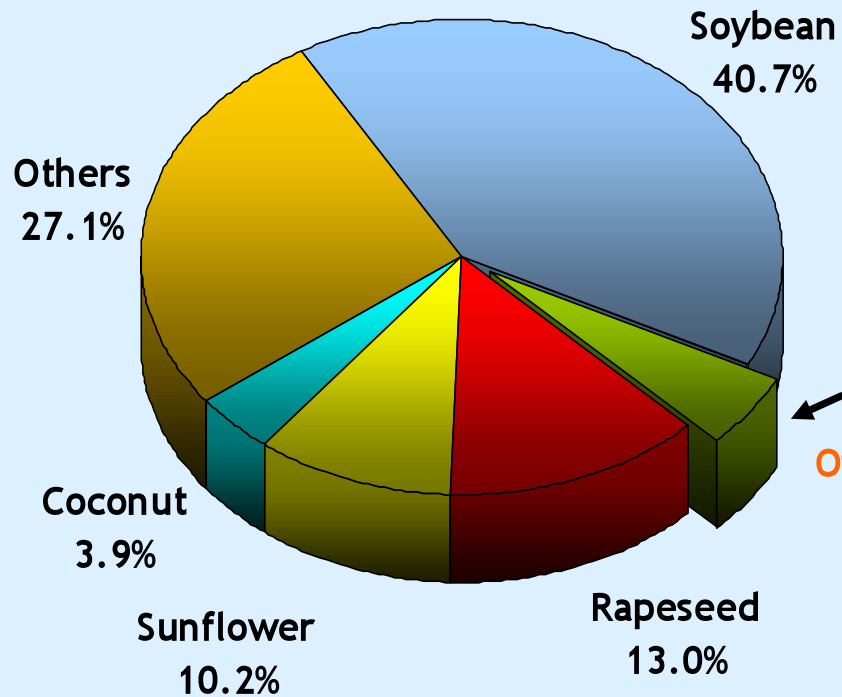
Note: ^a for palm oil and palm kernel oil

^b only for the 7 major oils (groundnut, coconut, cottonseed and the above oils)

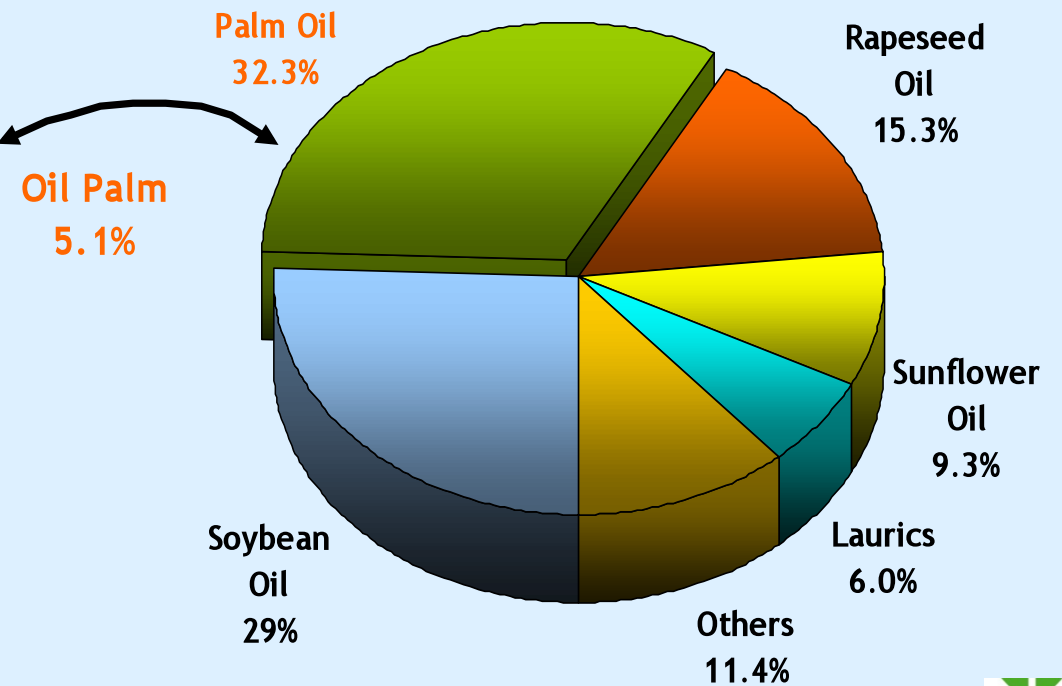
Source: Oil World Dec 2009

Oil Palm: Highest Oil Output on Least Land

Total Area: 241 mil ha

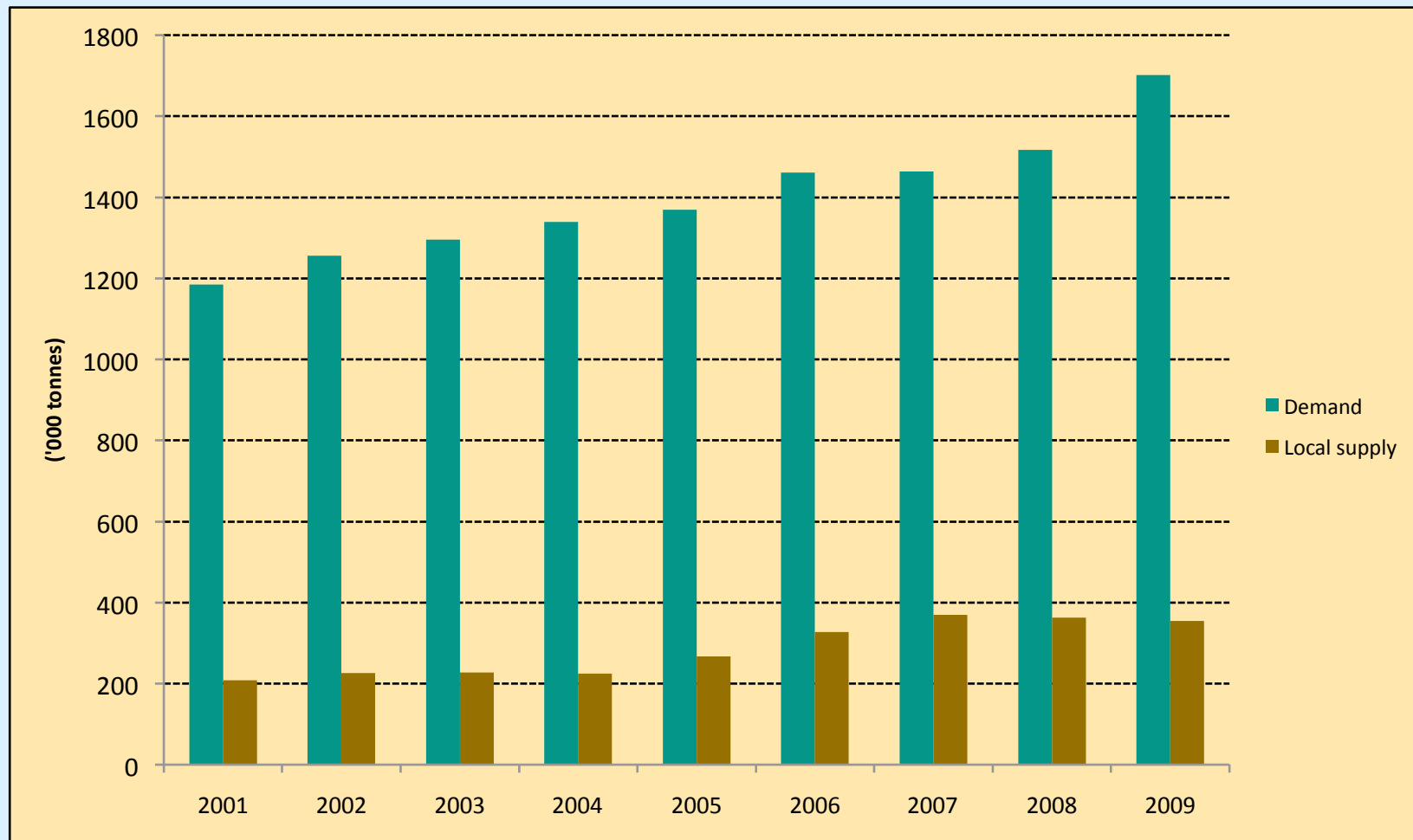


Total Vegetable Oil Output
139.7 mil MT



Egypt's Needs for Oils & Fats

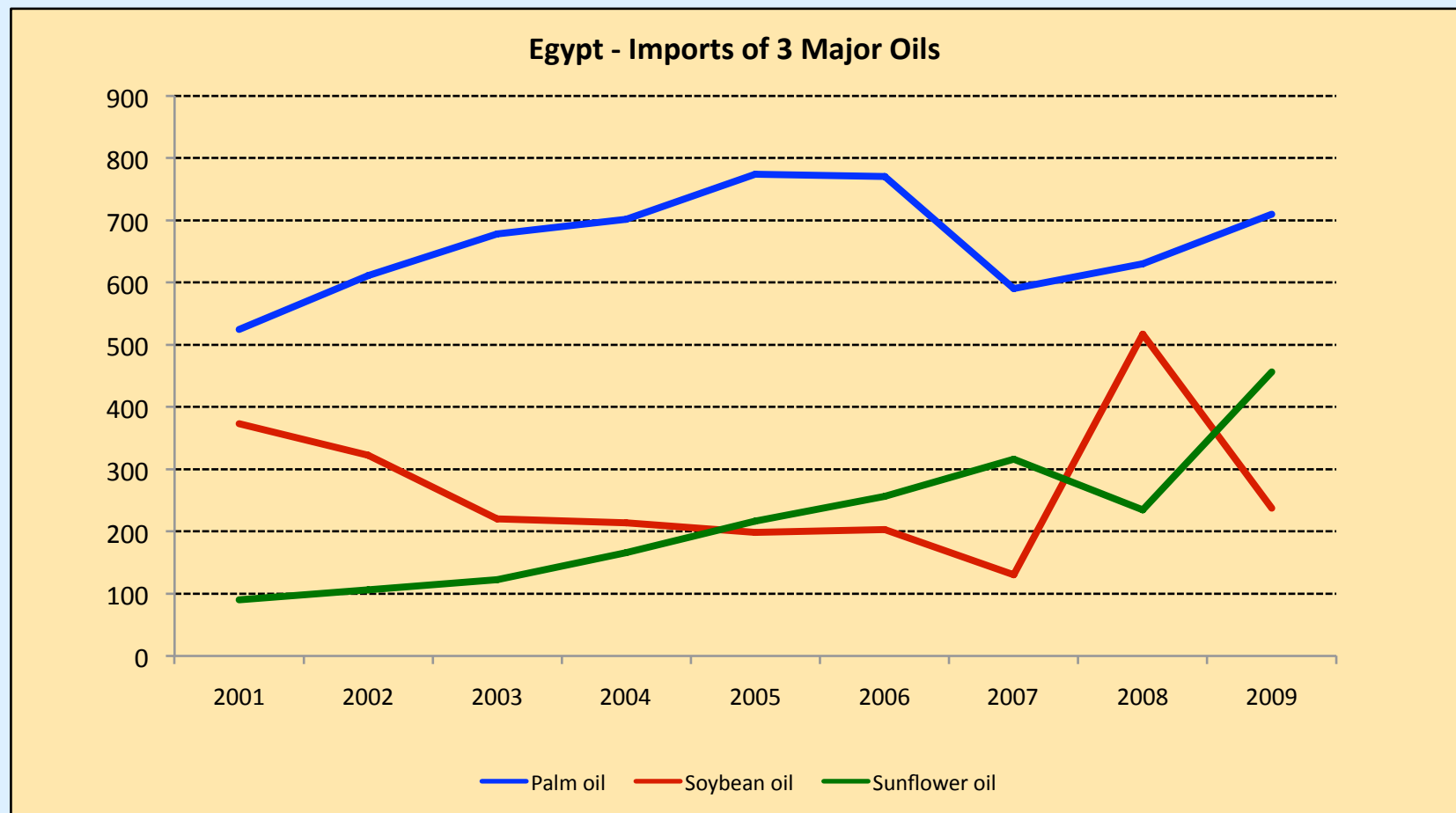
Expanding Oils & Fats Supply & Demand Gap



Source: Oil World

Egypt's Needs for Oils & Fats

Heavily Relying on Palm Oil

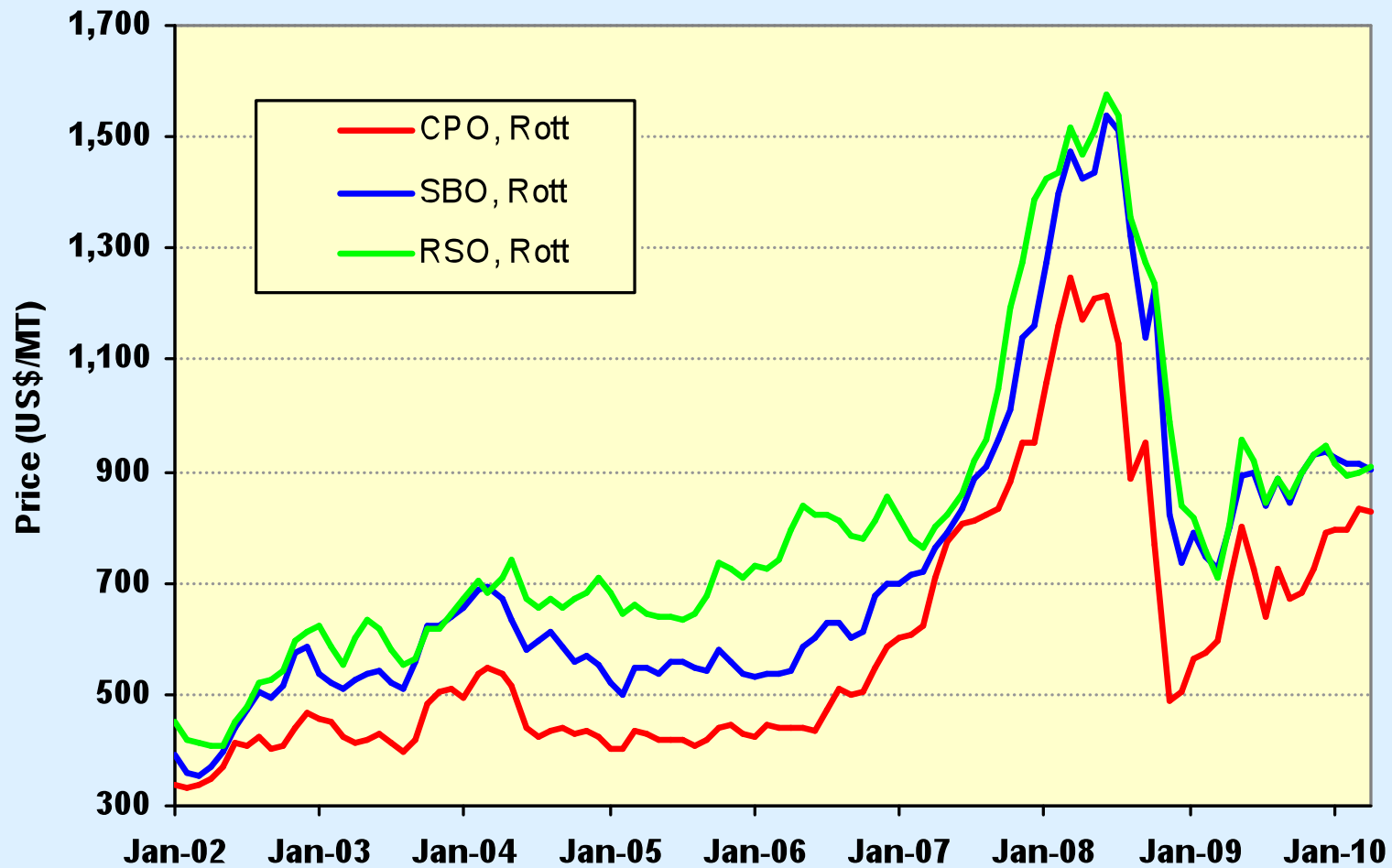


Source: Oil World

Why Buy Malaysian Palm Oil?

1. Why buy Malaysian palm oil?

Wide Discount over Soybean and Rapeseed Oil



1. Why buy Malaysian palm oil?

Competitively Priced Palm Oil

- **Palm oil prices have been at discount against soybean oil and sunflower oil, indicating the efficiency of production per unit area among these crops.**
- **Discounted by approximately US\$100 since 2009 though smaller than the record US\$400, palm oil remains attractive to lowering cost and making the users more competitive in the market.**
- **Semi-solid in nature further reduces the cost of producing solid or specialty fat, which at the same time contains no trans fats.**
- **Versatility of palm oil in various food and non-food applications offers vast options in marketing / utilizing this vegetable oil**

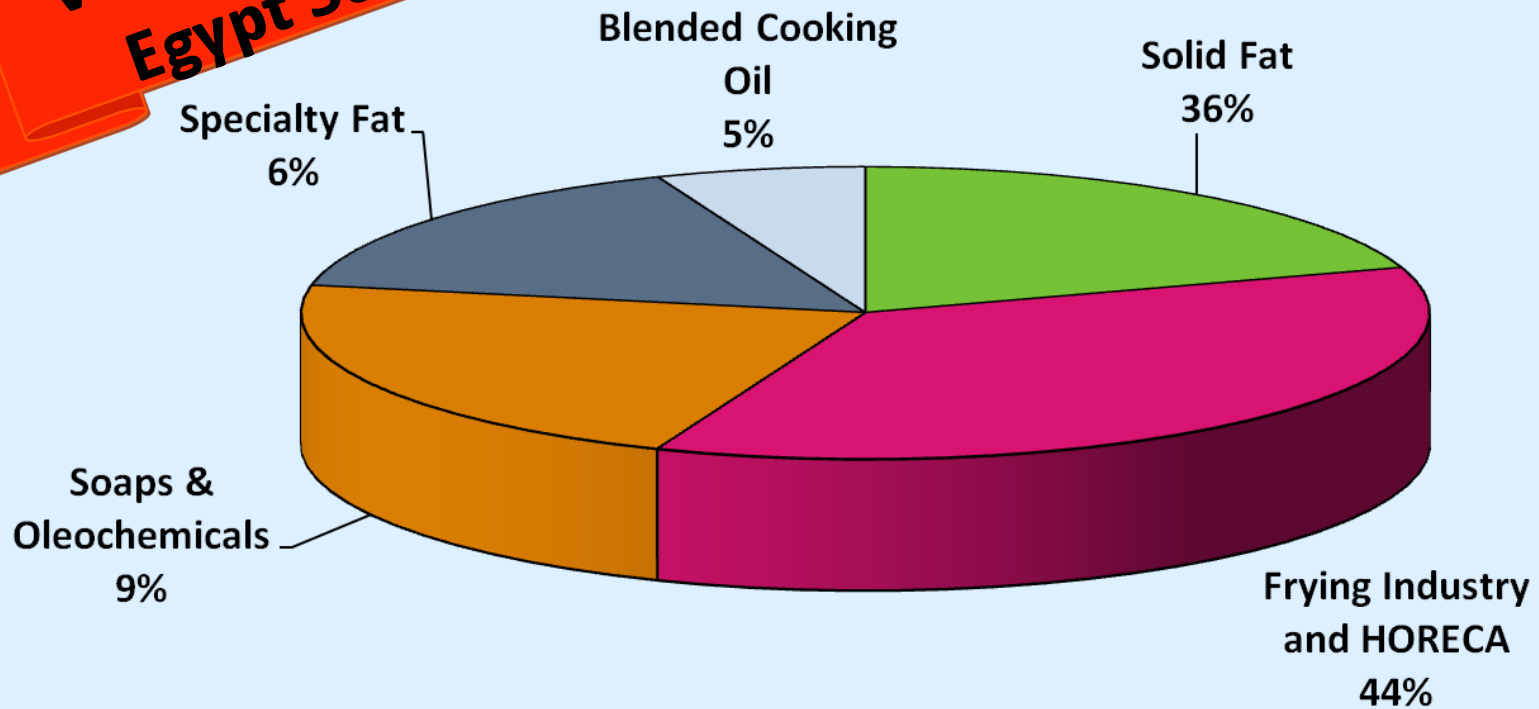
2. Why buy Malaysian palm oil?

Functionality

- **Highly stable as a frying oil and a preferred natural ingredient for production of all solid fats including margarine, shortenings, bakery and frying fats**
- **Best natural alternative for trans fat free formulations.**
- **Palm kernel stearin and palm mid fractions are excellent cocoa butter substitutes and highly geared for the confectionery industry**
- **Palm and palm products are major raw materials for the oleochemical industry for products such as soaps, detergents, personal health care products, etc.**
- **Being the world's largest exporter of palm and palm products, Malaysia is well poised to supply the needs of the food, oleochemical and biofuel industries.**

2. Why buy Malaysian palm oil?

**Versatility in Use,
Egypt Scenario**



Source: MPOC Cairo

3. Why buy Malaysian palm oil?

Good Business Ethics

- **Long history of cultivation (about 100 years) with good agricultural and production practices. Therefore, quality is assured.**
- **Malaysia proven to honour contracts through good & bad times (danger of being over-dependent on a few key suppliers).**
- **Long history in palm oil export assured experience and capability in meeting the specifications on the products required by buyers.**

4. Why buy Malaysian palm oil?

Excellent Oil for Heart Healthy Living

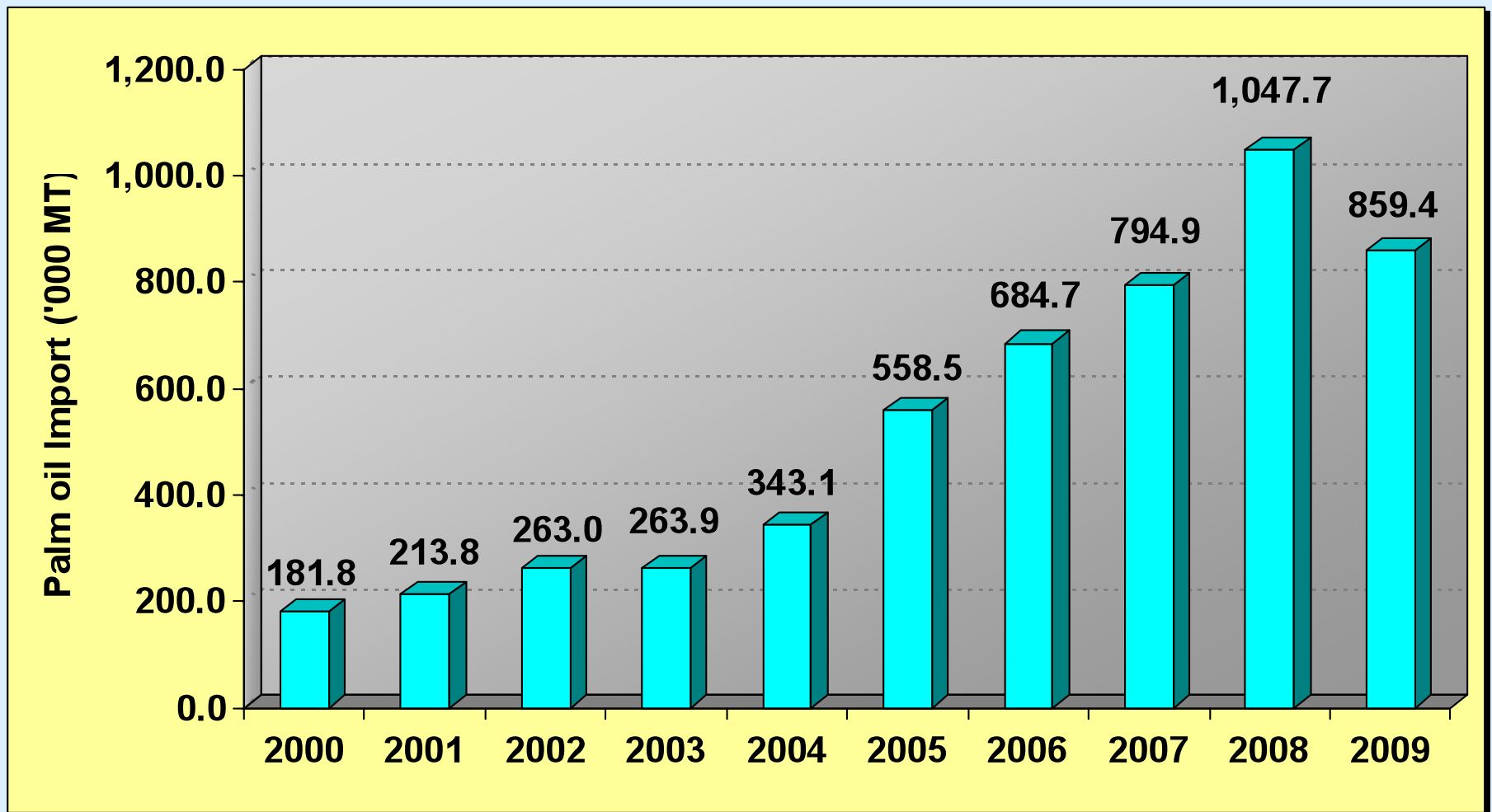
- Latest research by Harvard University (AJCN, 2010)
- **Saturated Fats are Not Linked to Heart Disease**
- Meta-analysis of 21 studies on 347,747 subjects around world showed there is no clear evidence associating intake of saturated fats with Coronary Vascular Disease (CVD), Coronary Heart Disease (CHD) or stroke
- The study raised doubts over the long held theory associating saturated fats to the risk of CVD and CHD.

4. Why buy Malaysian palm oil?

Excellent Oil to Avoid Trans Fatty Acids (TFA)

- **In humans, TFA increase total and LDL-cholesterol and reduce beneficial HDL-cholesterol; this increases risk for CHD.**
- **Liquid vegetable oils must be hydrogenated to produce solid fats, leading to the formation of TFA.**
- **Palm Oil is semi solid in nature; no hydrogenation is required and hence, contains no TFA.**
- **Palm oil has been proven a healthy substitute for TFA.**
- **This has led to significant increased demand for palm in solid fat formulations**
- **The current USA market is the best example of this development**

Imports of Malaysian Palm Oil in USA



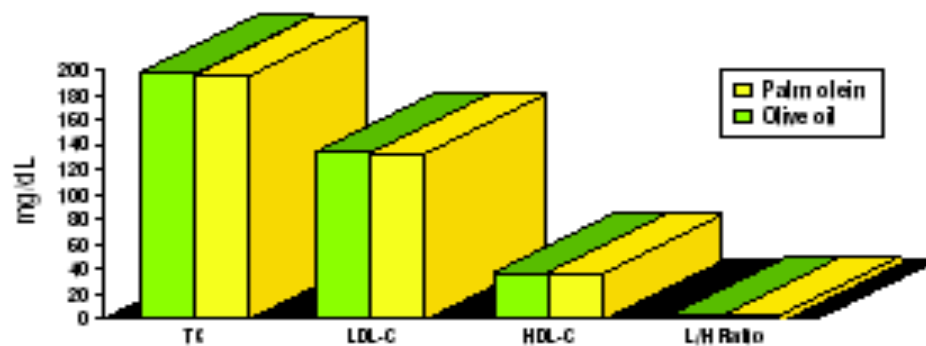
4. Why buy Malaysian palm oil?

Palm Oil contributes to improvement of cholesterol profiles

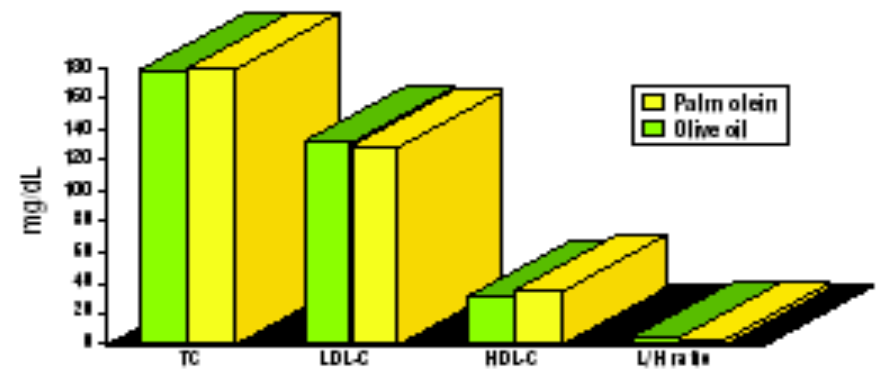
- American Heart Association recommends SAT:MUFA:PUFA in the ratio 1:1:1. This is easily achieved when palm oil contributes 50% of the AHA recommended Step-1 diet.
- Human trials at MPOB and US Brandeis University showed improved cholesterol ratios with palm based AHA formulation.
- US Patents granted with US FDA approved health claim for “Improved Cholesterol Ratio”. Today this is a US\$250 million p.a. margarine formulation in the USA



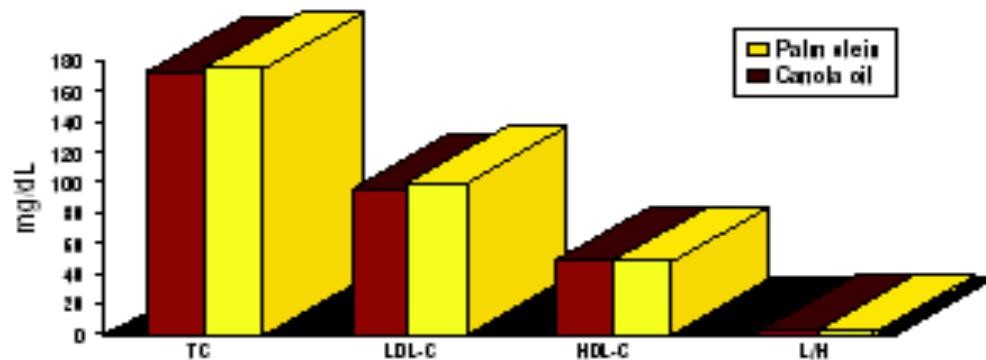
Palm olein reduces cholesterol as effectively as olive, Canola and rapeseed oils



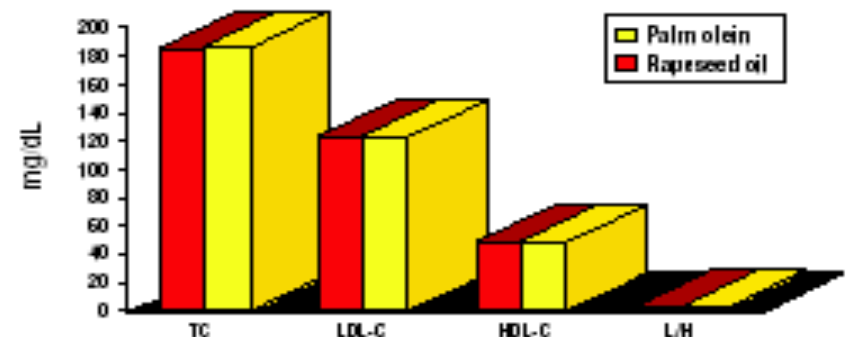
Diets enriched by palm olein or olive oil showed identical plasma cholesterol response in humans.
Ng et al. (1992) J. Am. Coll. Nutr.



Diets enriched by palm olein or olive oil showed identical plasma cholesterol response in humans.
Choudhury et al. (1995), Am. J. Clin. Nutr.



Palm olein or canola oil results in similar beneficial effects on plasma cholesterol.
Sundram et al. (1995), J. Nutr. Biochem



Palm olein or rapeseed oil results in similar beneficial effects on plasma cholesterol.
Sundram et al. (1997) J. Nutrition

5. Why buy Malaysian palm oil?

Most Sustainably Produced

- **Anti palm oil lobby using issues of deforestation and killing wild-life (orang utan)**
- **Malaysian oil palm plantations not affected by these issues but have been placed in same basket (feedback from NGOs)**
- **Malaysian plantations established totally on legitimate agriculture land**
- **New plantings on land legally gazetted as agricultural land, 100% sustainable, all are licensed and registered legally**
- **Increase no. of companies producing Certified Sustainable Palm Oil but there are still more than 99.9% of other oils & fats produced globally which are not yet certified sustainable.**

RSPO Certified Mills and Certified Sustainable PO Production in Malaysia

Company	Mills	CPO (tonnes)
United Plantations Bhd	6	200,456
Sime Darby Bhd	5	209,444
Kulim Bhd	3	88,914
PPB Oil Palms	3	122,900
IOI Corp Bhd	3	155,447
KLK Bhd	2	92,000
Total	22	869,161

Source: RSPO

Highly Regulated Industry

- 1) National Land Code 1965
- 2) Land Acquisition Act 1960
- 3) Protection of Wildlife Act 1972
- 4) Environmental Land Conservation Act 1960 revised in 1989
- 5) Quality Act 1974 (Environmental Quality) (Prescribed Premises) (Crude Palm Oil) Regulation 1977
- 6) Environmental Quality (Clean Air) Regulation 1978
- 7) Labor Law
- 8) Workers' Minimum Standard of Housing & Amenities Act 1990
- 9) Occupational Safety & Health Act 1977
- 10) Pesticides Act 1974 (Pesticides Registration) Rules 1988
- 11) Pesticides (Licensing for sale & storage) Rules 1988
- 12) Pesticides (Labeling) Regulations 1984
- 13) Environmental Quality (Prescribed Activities) (Environmental Impact Assessment) Order 1987
- 14) Factories & Machinery (Noise Exposure) Regulations 1989
- 15) MPOB Act: Licensing, Registration and Quality Control of Palm Oil 1988

5. Why buy Malaysian palm oil?

Complies with Conservation Needs

- **Malaysian Palm Oil Wildlife Conservation Fund (MPOWCF)**
 - **managed by MPOC**
 - **many projects including Jungle Patrol to protect wildlife surrounding oil palm plantations**
 - **survey of orang utan population in Sabah**
 - **establish Orang Utan Island infant care centre**
 - **every 1 ha of oil palm planted, Malaysia conserves 4 ha of permanent forest**

CONCLUSIONS

- **Rising global demand for oils & fats will not be easily met with limited arable land. Possible solution is to rely on high yielding crop like palm.**
- **In the long run, deficit of oils & fats in Egypt will remain. Palm oil being cost competitive, versatile & nutritious has a role to supplement this shortage.**
- **Currently, Malaysia, Indonesia and Argentina are the only 3 countries able to export oils in large quantity. Among these, 2 are palm oil exporters signifying the ability for palm to meet global deficit including Egypt. So palm oil is playing an important role in assuring food security globally.**

CONCLUSIONS

- **Malaysia is your reliable supplier of palm oil judging from the years of experience in being the world class producer and exporter where its products exported to more than 150 countries globally. This is contributed by the strict regulations in assuring that all palm oil produced is of good quality.**
- **Malaysian palm oil is also sustainably produced and is able to meet European stringent requirement. This will enable Egyptian products using Malaysian palm oil having better market access into the world.**

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THANK YOU

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