Malaysian Responsible Palm Oil: Assuring Sustainable Supply of Oils & Fats Into The Future

PRESENTATION BY
Tan Sri Datuk Dr. Yusof Basiron
Chief Executive Officer
Malaysian Palm Oil Council
1. Palm oil’s dominance in the Oils and Fats market

2. Importance of palm oil to China

3. Long term Demand of Palm Oil is strong

4. Short-term palm oil price under-valued

5. Long Term and Short Term Strategies

6. Malaysia’s responsible oil palm cultivation practices

7. Conclusion
<table>
<thead>
<tr>
<th>Year Range</th>
<th>Demand (million tonnes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996/2000</td>
<td>103.4</td>
</tr>
<tr>
<td>2001/2005</td>
<td>121.2</td>
</tr>
<tr>
<td>2011/2015</td>
<td>156.4</td>
</tr>
<tr>
<td>2016/2020</td>
<td>175.3</td>
</tr>
</tbody>
</table>

Source: Oil World 2020
Oils & Fats Production 1990 - 2011

1990 Production : 80.7 million MT

2011 Production : 180.1 million MT

Source : Oilworld
Oils & Fats Exports 1990 - 2011

1990 Exports: 23.1 million MT

Palm Oil: 36%
Soybean Oil: 14%
Sunflower Oil: 8%
Rapeseed Oil: 5%
Others: 16%

Source: Oilworld
IMPORTANCE OF PALM OIL & ITS DERIVATIVES

1. Source of food (global food security): 80%
2. Oleochemicals: 15%
3. Biofuel: 2%
4. Renewable energy source: Potential Remains Largely Untapped through Palm Biomass

Palm Oil Currently Accounts for 28% of Global Oils & Fats Supply
PALM OIL APPLICATION - FOOD USES
PALM OIL APPLICATION - NON FOOD USES
GLOBAL FOOD SECURITY ISSUE
The world population is projected to grow from 7 billion in 2011 to 9 billion by 2043, an increase of 29 percent. Food production must meet this rate of increase.

Future of palm oil is driven by growth in demand for food, oleochemicals and biofuel due to population and economic growth.

Source: U.S. Census Bureau, International Data Base, June 2009 Update.
Per capita crop land has declined since 1960 thus more pressure on farms to increase yields.
Fighting Hunger Worldwide

The cost of hunger to developing nations is an estimated US$450 billion per year.

It takes only 25 US cents for WFP to give a hungry schoolchild a cup of food with all the nutrition needed for the day.

The number of undernourished people worldwide is just under 1 billion – equivalent to the population of North America and Europe combined.

Hunger Map 2011

<table>
<thead>
<tr>
<th>Category</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Incomplete data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undernourished</td>
<td>&lt;5%</td>
<td>5-9%</td>
<td>10-19%</td>
<td>20-34%</td>
<td>≥35%</td>
<td></td>
</tr>
<tr>
<td>Description</td>
<td>Extremely low</td>
<td>Very low</td>
<td>Moderately low</td>
<td>Moderately high</td>
<td>Very high</td>
<td></td>
</tr>
</tbody>
</table>

Source: The State of Food Insecurity in the World 2011, Food and Agriculture Organization of the United Nations. Please note: the WFP 2011 data uses some cases taken back to 2005 as it may not always reflect the present-day situation in individual countries.

© 2011 World Food Programme

* The line of Control in Yemen and Saudi Arabia is represented approximately by a dotted line. The official status of Yemen and Saudi Arabia has not yet been agreed upon by the experts.

** A dispute exists between the governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty over the Falkland Islands (Malvinas).
## Global Supply and Demand of Oils & Fats 2006-2012 (F)

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Opening Stock</strong></td>
<td>17,799</td>
<td>18,404</td>
<td>19,526</td>
<td>20,589</td>
<td>21,327</td>
<td>22,158</td>
</tr>
<tr>
<td><strong>Production</strong></td>
<td>153,735</td>
<td>159,876</td>
<td>164,586</td>
<td>172,011</td>
<td>179,380</td>
<td>179,422</td>
</tr>
<tr>
<td><strong>Import</strong></td>
<td>56,275</td>
<td>59,831</td>
<td>63,029</td>
<td>64,936</td>
<td>66,599</td>
<td>70,277</td>
</tr>
<tr>
<td><strong>Export</strong></td>
<td>57,779</td>
<td>60,609</td>
<td>63,827</td>
<td>66,147</td>
<td>68,232</td>
<td>69,248</td>
</tr>
<tr>
<td><strong>Consumption</strong></td>
<td>151,626</td>
<td>157,975</td>
<td>162,726</td>
<td>170,061</td>
<td>176,917</td>
<td>182,301</td>
</tr>
<tr>
<td><strong>Ending Stock</strong></td>
<td>18,404</td>
<td>19,526</td>
<td>20,589</td>
<td>21,327</td>
<td>22,158</td>
<td>20,807</td>
</tr>
<tr>
<td><strong>Stock Usage Ratio</strong></td>
<td>12.14%</td>
<td>12.36%</td>
<td>12.65%</td>
<td>12.54%</td>
<td>12.52%</td>
<td>11.14%</td>
</tr>
</tbody>
</table>
We forecast that there will be a supply shortage of about 2 million MT of oils & fats in 2012.

Despite the improvement in weather conditions in US and South America, oilseed production is not expected to improve as it will only be harvested in late 2012.

Palm oil has always been a stable and reliable supplier of oils & fats.

Malaysian palm oil, despite the gloomy earlier projection is forecast to produce at least 18 million MT this year.

This shows the crucial role Malaysian palm oil will play in the supply of oils & fats to the world.
Based on supply and demand factors, the price of palm oil should be RM3,400 but is currently trading at RM2,386.
Palm oil which is traditionally traded at a discount between USD90 – USD240 per MT over soybean oil in the international market is attractively priced. The oil is currently offered at a discount exceeding USD300/MT.
### Current Palm Oil Price Undervalued

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Oils and Fats</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ending stock (&quot;000 MT&quot;)</td>
<td>22,397</td>
<td>21,796+</td>
</tr>
<tr>
<td>Price (USD)</td>
<td>1,027^</td>
<td>830*</td>
</tr>
</tbody>
</table>

Source: Oilworld

Note:  
- ^ - Year end 2011 price  
- + - Global Oils and Fats 2012 estimated ending stocks  
- * - Price of palm oil in the international market on 14th November 2012

Anticipated current price at USD830 cannot be maintained as the ending stocks of oils and fats projected for 2012 is lower than 2011. Therefore palm oil price should be traded higher, surpassing USD1,027 level.
Anticipated hike in palm oil price due to lower 2012/13 year-end global oils & fats stock

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ending Stocks ('000 MT)</td>
<td>22,397</td>
<td>21,796</td>
</tr>
</tbody>
</table>

Source: Oilworld

With lower ending stocks projected for Oct. 2012/Sept 2013, edible oil prices including palm oil price is anticipated to be higher in 2013.

Discounts offered by Indonesian palm oil players currently appear to have bottom out as their export tax is tied towards international palm oil prices.
**Indonesia export tax structure**

**BASIS:** The average of CIF Rotterdam CPO, Jakarta Derivative Exchange, Bursa Malaysia Berhad’s prices in USD of the preceding month to determine the export duty for the full next month.

<table>
<thead>
<tr>
<th>PRODUCTS</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>V</th>
<th>VI</th>
<th>VII</th>
<th>VIII</th>
<th>IX</th>
<th>X</th>
<th>XI</th>
<th>XII</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPO</td>
<td>0</td>
<td>7.5</td>
<td>9.0</td>
<td>10.5</td>
<td>12.0</td>
<td>13.5</td>
<td>15.0</td>
<td>16.5</td>
<td>18.0</td>
<td>19.5</td>
<td>21.0</td>
<td>22.5</td>
</tr>
<tr>
<td>CPKO</td>
<td>0</td>
<td>7.5</td>
<td>9.0</td>
<td>10.5</td>
<td>12.0</td>
<td>13.5</td>
<td>15.0</td>
<td>16.5</td>
<td>18.0</td>
<td>19.5</td>
<td>21.0</td>
<td>22.5</td>
</tr>
<tr>
<td>RBD Palm Olein</td>
<td>0</td>
<td>2.0</td>
<td>3.0</td>
<td>4.0</td>
<td>5.0</td>
<td>6.0</td>
<td>7.0</td>
<td>8.0</td>
<td>9.0</td>
<td>10.0</td>
<td>11.5</td>
<td>13.0</td>
</tr>
<tr>
<td>RBD Palm Oil</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2.0</td>
<td>3.0</td>
<td>4.0</td>
<td>5.0</td>
<td>6.0</td>
<td>7.0</td>
<td>8.0</td>
<td>9.0</td>
<td>10.0</td>
</tr>
<tr>
<td>RBD Palm Stearin</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2.0</td>
<td>3.0</td>
<td>4.0</td>
<td>5.0</td>
<td>6.0</td>
<td>7.0</td>
<td>8.0</td>
<td>9.0</td>
<td>10.0</td>
</tr>
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<td>Margarine/Shortening</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Biofuel</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>5</td>
<td>7.5</td>
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<tr>
<td>Oleochemical</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Source:** Indonesia’s Ministry Of Decree No. 67/PMK/2010

The average CPO CIF Rotterdam, Jakarta Derivative Exchange and Bursa Malaysia Berhad (USD) (x):

<table>
<thead>
<tr>
<th>I</th>
<th>x≤$750</th>
<th>IV</th>
<th>$850&lt;x&lt;=$900</th>
<th>VII</th>
<th>$1000&lt;x&lt;=$1050</th>
<th>X</th>
<th>$1150&lt;x&lt;=$1200</th>
</tr>
</thead>
<tbody>
<tr>
<td>II</td>
<td>$750&lt;x&lt;=$800</td>
<td>V</td>
<td>$900&lt;x&lt;=$950</td>
<td>VIII</td>
<td>$1050&lt;x&lt;=$1100</td>
<td>XI</td>
<td>$1200&lt;x&lt;=$1250</td>
</tr>
<tr>
<td>III</td>
<td>$800&lt;x&lt;=$850</td>
<td>VI</td>
<td>$950&lt;x&lt;=$1000</td>
<td>IX</td>
<td>$1100&lt;x&lt;=$1150</td>
<td>XII</td>
<td>&gt;$1250</td>
</tr>
</tbody>
</table>
World’s growing dependence on palm oil will boost demand further into the future

Source: Oil World
High Land Productivity of Oil Palm Yield – Palm Oil vs Other Oilseeds

Productivity of oil palm is:

• 11x more than soyabean
• 10x more than sunflower
• 7x more than rapeseed

Source: * FAO ** Oil World *** MPOB
### Population growth drives preference for palm oil as food, avoiding more land conversion to other oil seed crops

<table>
<thead>
<tr>
<th>Year Population (billion)</th>
<th>2025</th>
<th>2040</th>
<th>2080</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7.9</td>
<td>8.5</td>
<td>9.1</td>
</tr>
</tbody>
</table>

- **Projected Additional Palm oil to be supplied by Malaysia (m MT)**
  - 2025: 2.7 MT
  - 2040: 5.3 MT
  - 2080: 7.7 MT

- **Estimated Additional land needed for palm oil cultivation in Malaysia (m ha)**
  - 2025: 0.7 ha
  - 2040: 1.4 ha
  - 2080: 2.1 ha

- **Additional land needed to cultivate Rapeseed to offset this oil palm cultivation (m ha)**
  - 2025: 4.5 ha
  - 2040: 9.0 ha
  - 2080: 13.4 ha

- **Additional land needed to cultivate Sunflower to offset oil palm cultivation (m ha)**
  - 2025: 5.7 ha
  - 2040: 11.3 ha
  - 2080: 17.0 ha

- **Additional land needed to cultivate Soybean to offset oil palm cultivation (m ha)**
  - 2025: 7.2 ha
  - 2040: 14.4 ha
  - 2080: 21.6 ha

- 7-11 times more land needed if other oil crops were to substitute Malaysian palm oil to meet future demand.
- 21.6 m ha of land needed for soybean cultivation in 2080 is equivalent to 2/3 of land area of Malaysia.
China’s O&F production not sufficient to meet domestic demand

Supply & Demand Gap increasing

('000 MT)

Consumption  Production

Source: Oilworld & MPOC estimates
Palm Oil - Major edible oil imported to fill China’s oils and fats shortfall

China’s 2011 Oils & Fats Import

- Soybean oil: 20%
- Palm oil: 13%
- Others: 67%

2011 O&F import: 9.17 Mn MT

Source: Oilworld & MPOC estimates
Malaysia’s market share in China’s palm oil market is the highest

Malaysia and Indonesia share in China's palm oil market

Source: Oilworld & MPOC estimates

Source: Oilworld
The Global Bio-fuel Market
# Projected World Requirements for Food & Biofuels (MT)

<table>
<thead>
<tr>
<th>Source</th>
<th>2015</th>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food</td>
<td>147.2</td>
<td>160.7</td>
</tr>
<tr>
<td>Biofuels</td>
<td>57</td>
<td>102</td>
</tr>
<tr>
<td>TOTAL</td>
<td>204.2</td>
<td>262.7</td>
</tr>
</tbody>
</table>

*Source: Legge (2008)*
World Energy Demand—Long-Term Energy Sources

Due to the manner in which the production decline rate is developing, the IEA anticipates a powerful decline in production in all oil fields from 70 million barrels/day in 2007 to 27.1 million barrels in 2030 (see Illustration 5).

Illustration 5: Development of petroleum production in current fields

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22 Höök, Hirsch and Aleklett 2009
23 IEA 2008a.
1. Increasing biodiesel consumption mandates in Brazil and Argentina along with robust European demand continues to divert South American soybean oil into the fuel market.

2. While the United States has seen some gain in soybean oil exports as a result of the limited South American supply, most of the offset has been in larger global exports of palm oil.

3. Further growth in biodiesel production is expected as capacity expands in response to additional consumption mandates.
Figure I. Trend in EU biodiesel production 1998-2011. Source: EBB 2011

Note: 2011 figures are only estimations.
Long term Strategies

1. Sustainable supply. Multiple certification schemes RSPO, MSPO, etc
2. Increased Productivity
C4. CSPO Annual Production Capacity (Mt, %) by Country

- INDONESIA, 2,707,249, 45%
- MALAYSIA, 2,692,230, 45%
- BRAZIL, 125,793, 2%
- SOLOMON ISLANDS, 28,830, 0.5%
- IVORY COAST, 5,760, 0.1%
- COLOMBIA, 22,000, 0.4%
- PAPUA NEW GUINEA, 435,331, 7%
C3. CSPO & CSPK Annual Production Capacity (mt) by Year

<table>
<thead>
<tr>
<th>Year</th>
<th>CSPO</th>
<th>CSPK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec 08</td>
<td>619,012</td>
<td>154,335</td>
</tr>
<tr>
<td>Dec 09</td>
<td>1,473,912</td>
<td>338,740</td>
</tr>
<tr>
<td>Dec 10</td>
<td>3,522,207</td>
<td>803,999</td>
</tr>
<tr>
<td>Dec 11</td>
<td>5,573,202</td>
<td>1,296,488</td>
</tr>
<tr>
<td>Mar 12</td>
<td>6,017,193</td>
<td>1,388,170</td>
</tr>
</tbody>
</table>
Malaysia’s deforestation rate is lowest

Forest area & deforestation rate in selected countries (1990-2010)

<table>
<thead>
<tr>
<th>Country</th>
<th>Forest area (Million ha)</th>
<th>Deforestation (Million ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>154.92</td>
<td>153.92</td>
</tr>
<tr>
<td>Indonesia</td>
<td>99.41</td>
<td>97.86</td>
</tr>
<tr>
<td>Argentina</td>
<td>31.86</td>
<td>30.60</td>
</tr>
<tr>
<td>Malaysia</td>
<td>21.59</td>
<td>20.89</td>
</tr>
</tbody>
</table>

Source: FAO Global Forest Resources Assessment (2010)

- Malaysia would not deforest unnecessarily and will continue to use land judiciously
- Committed to Rio Summit pledge – to maintain at least 50% of total land area under forest
## Conservation of Forest / Biodiversity
Malaysian oil palm industry is land conservation friendly

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Area or %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaysian palm oil area</td>
<td>4.85 million ha</td>
</tr>
<tr>
<td>Malaysian agricultural land area</td>
<td>6.89 million ha</td>
</tr>
<tr>
<td>Total world land area for vegetable oils</td>
<td>244 million ha</td>
</tr>
<tr>
<td>Total world agricultural land area</td>
<td>5,660 million ha</td>
</tr>
<tr>
<td>Malaysian palm oil as % of total Malaysian agricultural land area</td>
<td>70%</td>
</tr>
<tr>
<td><strong>Malaysian palm oil as % of total world land area for oil bearing crops</strong></td>
<td><strong>2.0 %</strong></td>
</tr>
<tr>
<td><strong>Malaysian palm oil as % of total world agricultural land area</strong></td>
<td><strong>0.09%</strong></td>
</tr>
<tr>
<td>( of 5,660 million ha)</td>
<td></td>
</tr>
<tr>
<td>Malaysian palm oil’s contribution to global oils &amp; fats supply</td>
<td><strong>11.4%</strong></td>
</tr>
</tbody>
</table>
Distribution of forest in Malaysia versus other countries

- Average 23%
- Average 51%
Impact of Oil Palm Forest on CO2 emission

MALAYSIAN GREENHOUSE GAS EMISSION AND REMOVAL

Total CO2 Emission

249.8

Total Emission

223.1

Total CO2 Removal by plantation and forest

247

Total CO2 Removal By Forest and plantation

249.8

Emission by Energy Sector

217

Emission by Forest

147*

Emission by Others

49

Emission by LULUCF + Agriculture (Rice) Sectors

26.9

Emission by Palm Plantation

100*

Land Use, Land Use Change and Forestry (LULUCF) is made up of Forestry and (Oil Palm) Plantation Sector.

LULUCF = Land use and land use change and forestry.
The production of Sustainable Palm Oil

- Consumer demand for palm oil requires it not only to be safe and high quality but also sustainable.
- The EU demand for CSPO will be fully met as there are ample supply of CSPO.
- “Customers are always right” to this end, Malaysia will meet and supply what the customers want.
Poor uptake of Certified Sustainable Palm Oil

- CSPO production in 2011 was 5.6 million tonnes. As at March 2012 CSPO production was 6 million tonnes.

- Malaysian and Indonesian plantations contribute 45% each of RSPO production, & South America (2.4%).

- Poor uptake of CSPO by MNCs such as Nestle and Unilever.

- Implementation date pushed back by MNCs.

- Malaysia will continue to increase certified production and comply with an ever increasing stringent set of mandated standards.
Malaysian responsible palm oil
Malaysian deforestation free palm oil
Assurance through aggregate compliance, 100% licencing
Malaysian palm oil dedicated primarily for food supply while biofuel use is minimal

<table>
<thead>
<tr>
<th>Year</th>
<th>CPO production (t)</th>
<th>Biodiesel production (t)</th>
<th>Biodiesel production as % of total CPO production</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>15,823,745</td>
<td>128,236</td>
<td>0.81%</td>
</tr>
<tr>
<td>2008</td>
<td>17,734,441</td>
<td>197,610</td>
<td>1.11%</td>
</tr>
<tr>
<td>2009</td>
<td>17,564,937</td>
<td>238,469</td>
<td>1.36%</td>
</tr>
<tr>
<td>2010</td>
<td>16,993,000</td>
<td>190,374</td>
<td>1.13%</td>
</tr>
<tr>
<td>2011</td>
<td>18,911,520</td>
<td>49,999</td>
<td>0.26%</td>
</tr>
</tbody>
</table>

Potential for use as second generation renewable energy source is an important driver and opportunity towards reduced use of polluting fossil fuels.
# Productivity improvement: Malaysian Palm Oil Production Efficient Use of Land

<table>
<thead>
<tr>
<th>Year</th>
<th>Land and Area ('000 Ha)</th>
<th>Production ('000 MT)</th>
<th>Efficiency Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>1,480</td>
<td>4,133</td>
<td>1:2.79</td>
</tr>
<tr>
<td>1990</td>
<td>2,030</td>
<td>6,095</td>
<td>1:3.00</td>
</tr>
<tr>
<td>2000</td>
<td>3,370</td>
<td>10,840</td>
<td>1:3.22</td>
</tr>
<tr>
<td>2005</td>
<td>4,050</td>
<td>14,961</td>
<td>1:3.69</td>
</tr>
<tr>
<td>2011</td>
<td>4,980</td>
<td>18,912</td>
<td>1:3.80</td>
</tr>
</tbody>
</table>
Malaysia's Plantation Social Responsibility

Housing for workers

Nursery

School
Malaysia's Plantation Social Responsibility – Zero Burning Techniques In Replanting

Shredding Of Palm Trunk

Shredded Materials In The Field
BIOCONTROL AGENTS USED IN OIL PALM PLANTATIONS
Malaysia’s Plantation Social Responsibility - Places of worship for the workers

Church

Temple

Mosque
Action to introduce Malaysian Responsible Palm Oil Supply Into the Market

- All Malaysian palm oil is responsibly produced
- Malaysia follows the deforestation standard set by developed countries but does not exceed the percentage of any developed country
- All Malaysian palm oil is relatively deforestation free.
Malaysian Deforestation Free (MDF) Palm Oil Can be Certified With 100% Compliance

- All plantations are licensed to operate on legitimate agricultural land and this is strictly enforced by Malaysian Palm Oil Board (MPOB)
- Plantation is part of agriculture sector which is benchmarked to use less land in percentage compared to standard set in developed countries (Even though the country is still developing and has not yet fully developed its land assets)
Malaysia commits to conserve a higher percentage of forest than the benchmark set in developed countries (presently 50%).

Malaysia reports regularly to the UNFCC the negative carbon footprint of the oil palm industry (Oil palm plantations are net remover of CO2 from the atmosphere).
Greenhouse gas emission

• The Malaysian Palm oil industry has negligible carbon footprint of 0.015% of global total GHG emission.

• Doubling the planted area does not cause any significant increase in emission.

• Durban climate change meeting did not achieve any immediate GHG reduction commitments. Canada withdrew from Kyoto protocol to reserve its right to mine tar sand and continue to generate GHG.

• Developed countries use CHG emissions as a tool to protect their biodiesel industry from competition.

• Palm oil is otherwise the best biofuel source as shown in the next chart.
Mileage per ha per year: Based on a VW Polo

- Soy Biodiesel: 8,000 km, 440 litre
- Rapeseed Biodiesel: 23,660 km, 1,300 litre
- Bioethanol: 33,000 km, 2,500 litre
- Jatropha Biodiesel: 45,500 km, 2,500 litre
- Sundiesel (BtL): 75,330 km, 4,050 litre
- Biomethane: 99,600 km, 4,980 litre
- Palm Biodiesel: 109,000 km, 6,000 litre

Yield per hectare:

Source: “Biofuels”, Fachagentur Nachwachsende Rohstoffe e.V. (FNR), 2006 and own data
Conclusion

• Palm oil will continue to be a major source of oils & fats that is required to meet global food security demands.

• Oil palm cultivation is shown to require less land to produce each unit equivalent of edible oil.

• When arable land is limited, it makes sense to choose palm cultivation over other oilseeds given the higher yields from oil palm.

• Higher yield projections increasing stepwise from 4Mt/ha to almost 12MT/ha will make palm the oilseed crop of choice in many countries aspiring for greater food (oils) security.
Malaysia is a signatory to UN sponsored biodiversity agreements & honors these pledges even while seeking economic advancements.

Limited land and labour availability will require Malaysian palm oil industry to conserve land and move towards responsible cultivation practices.

Malaysia has pledged at least 50% of country’s land under forest cover.

Certification is voluntary and mostly welcome by the industry that has clearly demonstrated its ability to meet international standards, despite low offtakes and negligible premium offered by buyers.

Sustainability is not an issue for Malaysian palm oil, but made an issue by the western environmental NGOs.

MPO is responsibly produced, developed along the lines of balancing the 3 Ps i.e. People, Profit and Planet. In pursuit of profitability, concerted efforts have been undertaken to ensure minimum disruption to ecological balance and amenities are provided for the welfare of workers.
Palm oil price is currently undervalued but it is expected to recover. This presents a good opportunity for importers to stock up the oil at competitive price.

World supply (lower soyabean crops) has not been able to replenish stocks for the 3rd year running. However, softening demand and price distortion in Indonesia may prevent palm oil prices from rising in the near future, and it should be maintaining a good discount to soyabean oil, making it attractive to buy.