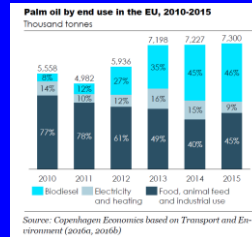


WEBINAR UPM:

The KEY to E.U. Market Access is Sustainable & Safe Palm Oil

Keynote Address
by
Ir. Kumar Subramaniam

EU Imports of Palm Oil



- In 2017, EU imports of palm oil used for biodiesel from Indonesia, Malaysia and Thailand, totalled EUR 2 billion (about 45%)
- Total Import of Palm oil for other uses was EUR 2.4 billion (about 55%)

EU's Complaints about Palm Oil

(Source: Desmet Ballestra Group 2019)

1. Not sustainable enough (bad for environment & nature)
2. Not healthy enough (too saturated)
3. Not safe enough (3MCPDE/GE)

Note: The 1st complaint of EU was reason for the ban on Palm oil in biofuel by European Parliament

Let us look into the first part of the KEY

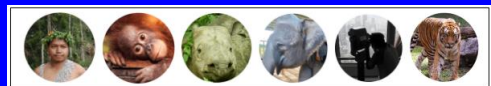
- What is sustainable palm oil?
- Is Malaysia producing sustainable palm oil?

Malaysian Palm Oil Industry

- The palm oil industry has been evolving in the last 10 years and becoming very much sustainable in Malaysia.
- Exports of palm oil products contribute billions of ringgit to our GDP, and Malaysia is keen to promote sustainable palm oil to gain access into the European market.

Rainforest & Deforestation

- Malaysia is home to some of the world's oldest rainforests. They sustain a diversity of life which would suffer with **deforestation**



Indigenous Tribes Orangutan Rhino Elephants Local Residents Tigers

Sustainable Palm Oil Prevents Further Deforestation

- Sustainable Palm Oil can prevent further deforestation around the world
 - While a palm oil boycott could actually cause more damage to the environment.
- WHY?**
- Palm oil takes up just 0.11% of global agricultural land but contributes over 20% of global Edible Oils and Fats exports.

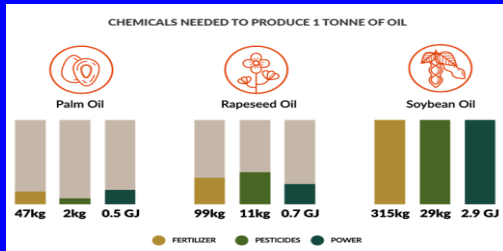
Palm Oil is a Wonder Crop

It uses the least land per ton of oil produced:

- > 3.8 ton of oil per hectare for Palm Oil
- 0.38 ton of oil per hectare for Soybean
- 0.62 ton of oil per hectare for Sunflower
- 0.84 ton of oil per hectare for Rapeseed

Palm Oil is a Wonder Crop

It uses the least Inputs per ton of oil



Palm Oil is Very Versatile

Main Palm oil consumers

Country	Volumes (mt)
India	10.80
Indonesia	9.45
China	4.85
Malaysia	3.11
EU	6.55

- Very stable oil, easy to process and store
- Most versatile oil with wide applications (fractionation)
- Lowest in price as compared to other vegetable oils
- About 50% of the grocery products contain palm oil

(Source: Desmet Ballestra Group 2019)

Deforestation for Other Land Uses

- In 2000, for example, 47,278 sq km of forest cover were lost in Malaysia
 - Oil palm plantations expanded only by 17,000 sq km (1.7 million ha).
- Other land uses & drivers of deforestation include:
- Timber
 - Pulpwood
 - Infrastructure projects
 - Urban development
 - Rubber

Outcome of Sustainable Palm Oil

NO MORE OF:

- Deforestation
- Habitat loss
- Carbon pollution
- Exploitation

MORE OF:

- Sustainable Forest Management
- Organic Fertilizer & Compost
- Health & Safety Standards
- Wildlife Standards

Certified Sustainable Palm Oil



- Sustainability efforts are regulated by national and international certification standards, such as, the Malaysian Sustainable Palm Oil (MSPO) Certification, the Roundtable on Sustainable Palm Oil (RSPO) Certification and the International Sustainability Standard (ISCC).

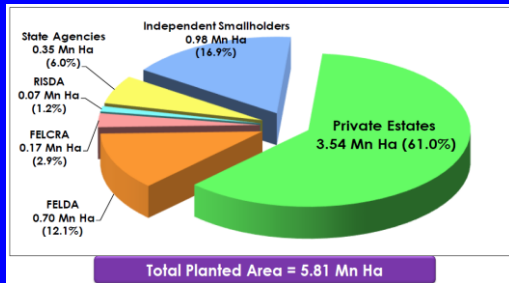
Mandatory MSPO Certification

- Malaysia made its MSPO certification mandatory for all growers in the country; from large multinational corporations to smallholders, who produce around **40% of Malaysia's palm oil**.

As of June 30, 2020

- Certified sustainable oil palm estates = **87.25%**
- Certified sustainable palm oil mills = **94.03%**

Oil Palm Planted Area by Category in 2017



(Source: MPOB, 2018)

EU's Complaints about Palm Oil

(Source: Desmet Ballestra Group 2019)

1. Not sustainable enough (bad for environment & nature)
2. Not healthy enough (too saturated)
3. Not safe enough (3MCPDE/GE)

Note: The 1st complaint of EU is being resolved and to-date 87.25% Malaysian estates are producing sustainable palm oil

The 2nd complaint of EU is that Palm Oil is not healthy enough

- In the 1950s, the saturated fat in coconut oil was linked to heart disease. Excessive consumption of the saturated fat was claimed to boost LDL cholesterol and triglycerides (risk factors to heart disease). Palm oil is also high in saturated fat.
- Recent studies highlights benefits of palm oil taken in moderation in nutrition, health & well-being. Palm oil decreases cholesterol, protects brain function, reduces heart disease risk & improve Vitamin A status

Let us look into the second part of the KEY:

- What is safe palm oil?
- Is Malaysia producing safe palm oil?

The 3rd complaint of EU is on Safety which is re-defined by EU in settings New Maximum Limits for 3-MCPDE

- 1,250µg/kg (1.25 ppm) for unrefined oils
- 2,500µg/kg (2.5 ppm) for refined oils
- 750µg/kg (0.75 ppm) for vegetable oils and fats destined for baby food and processed cereal

High Concentration of 3-MCPD Ester was found in Refined Oils and Fats

Level	Concentration, mg kg ⁻¹	Types of vegetable oils and fats
Low	0.2-1.0	rapeseed, soyabean, coconut, kernel sunflower oil, virgin olive oil
Medium	1.01-2.5	saflflower, groundnut, corn, pomace olive
High	>2.5	palm oil, palm olein

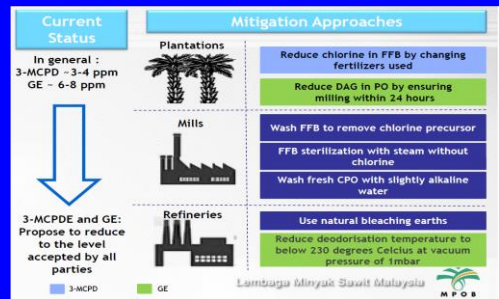
(Source: Sime Darby, 2019)

3 MCPD Ester in Palm Oil Production Chain

- Formation of 3-MCPD Ester is due to many factors such as heat, chloride ions, acylglycerols content and acidic processing chemicals.
- The mitigation strategy may require the modification of the entire palm oil supply chain process.

(Source: Sime Darby, 2019)

Study of 3 MCPDE & GE by MPOB



(Source: Razak, MPOB, 2017)

Mitigation for 3 MCPDE at Palm Oil Mills

Recommended practices:

- Water used in the mill to be treated to remove Chlorides
- FFBs to be processed within 24 hours
- Recovered oils not to be mixed with CPO
- CPO to be rinsed with water before delivery to refineries

(Source: MPOB, 2017)

MPOB Circular on the Mixing of CPO

- To address the 3 MCPDE and GE issues, MPOB issued a circular on 3rd June 2019 advising all licensed palm oil millers to stop mixing the pure crude palm oil with the poor quality crude palm oil recovered from the condensate water, pressed EFB liquor and other sources.

MPOB Circular on CPO Washing

Slide 25

- In MPOB's revised CPO quality standards, the maximum allowable level of chlorine in the CPO is **2.0 ppm** and it is already come into effect since 1st July 2020.
- MPOB has put the responsibility of reducing the chlorine content in the CPO at the mill.

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- According to MPOB's revised quality standards, the maximum allowable level of 3-MCPDE in:
 - PPO (Processed Palm Oil) is **2.5 ppm**, starting 1st January 2021
 - PPKO (Processed Palm Kernel Oil) is **1.25 ppm**, starting 1st January 2021.
- The maximum level of 3-MCPDE in PPO will be lowered to **1.25 ppm**, starting 1st January 2022 for fully integrated plantation and 1st January 2023 for independent refineries.

Slide 26

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Equipment for CPO Washing

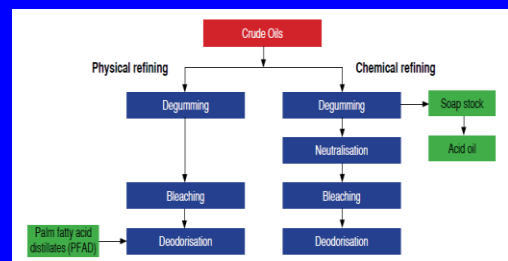
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Chemical and Physical Refining Process

Slide 28



(Source: Sime Darby, 2019)

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3-MCPD Ester in Chemical and Physical Refining Oils

Slide 29

Sample	FFA, (%)	Total Chloride, (ppm)	3-MCPD Ester, (ppm)
CPO	4.15	3.81	
RBDPO	0.04		3.47
NBDPO	0.03		1.12

Note: Chemical refining (Neutralised Bleached Deodorised Palm Oil process) can reduce 3-MCPDE to 1.12 ppm
(Source: Sime Darby, 2019)

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CONCLUSION

Slide 30

- The key to E.U. Market Access is to produce sustainable and safe palm oil.
- To-date, 87.25% Malaysian estates are producing sustainable palm oil and are working hard towards producing safe palm oil
- CPO washing at the mill brings Chloride ion content to < 2.0 ppm & enable refineries to produce refined palm oil at <2.5 ppm 3-MCPDE
- The ultimate target is to grade palm oil into different qualities for the different uses of palm oil

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Future Ideal Market Scenario - Grading of CPO

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(Source: Desmet Ballestra Group 2019)

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Redefining CPO Quality

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(Source: Desmet Ballestra Group 2019)

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Malaysia's Strong Commitments (Towards Sustainable Palm Oil)

Slide 33

- Capping oil palm planting at 6.5 million hectares,
- Stopping planting on peat areas and enforcing regulations on existing oil palm on peat land,
- Banning the conversion of forest reserved areas for oil palm cultivation,
- Opening oil palm plantation maps to public
- Working with WWF, Wild Asia, etc. to make positive changes in wildlife & biodiversity conservation

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Malaysia is surely producing sustainable and safe oil palm

Slide 34

- Oil palm plantations in Malaysia have complied to the international guidelines to produce sustainable and safe palm oil in the last decade and committed in improving their own standards within.
- Future oil palm planting and production of palm oil will be at a much improved sustainable level, much safer and very much environmental friendly.

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THANK YOU

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https://youtu.be/msonA0_4RRo

Herzuza Dongkin, a smallholder from Malaysia's indigenous community, explains why she uses sustainable practices to manage her farm.

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