OFIC 2014
OILS AND FATS INTERNATIONAL CONGRESS 2014
in conjunction with
OFI ASIA 2014
OILS AND FATS INTERNATIONAL ASIA 2014

Global Oils & Fats: Addressing Major Challenges

5-7 NOVEMBER 2014
KUALA LUMPUR CONVENTION CENTRE
MALAYSIA

Organised By:
MOSTA
Malaysian Oil Scientists’ and Technologists’ Association
www.mosta.org.my

In Collaboration With:
www.oilsandfatsinternational.com

MPOB
Malaysian Palm Oil Board
www.mpob.gov.my
I am pleased to invite you to participate in the Oils and Fats International Congress 2014 (OFIC 2014). It will be two years since our last congress and many major developments have taken place, which you should be aware and take account of. Thus our theme for the congress is “Global Oils and Fats: Addressing Major Challenges”. Indeed, the major challenges include the prospects of oils & fats as commodities, sustainable agriculture, shortage of labour and mechanization, innovation in the palm oil milling, advances in food and non-food applications, new knowledge in human nutrition and innovative advanced technologies and their applications to the industry. These issues will be addressed in the following modules:-

- Economics, Marketing & Policy
- Oils & Fats and The Environment
- Oils & Fats and Health
- Recent Innovative Technologies

The Congress will be proceeded by a technical visit to an oil palm plantation and a game of golf.

It will climax with a Congress dinner featuring the best of Asia. As usual an exhibition of advanced innovative technologies will be organized concurrently.

Looking forward to welcoming you.

Best regards

Academician Emeritus Prof Tan Sri Datuk Dr. Augustine S H Ong
President, MOSTA
Chairman, OFIC 2014 Organising Committee

About OFIC 2014

Oils and Fats international Congress series was launched by MOSTA in 1994 concurrently with an exhibition of latest available technology for the oils and fats industry being held. These events will focus on the major challenges faced by the oils and fats industry for possible solutions. The coverage of these issues is reflected in the synopses of the five modules.

Who should attend OFIC 2014?

OFIC 2014 is designed for those involved in the oils and fats industry including the following:

- Industry Captains and CEOs
- Planters and Mill Engineers
- Refiners and Processors of Consumer Goods
- Biofuel Producers
- Quality Assurance Personnel and Process Engineers
- Academics and R & D Personnel
- Scientists and Technologists
- Traders, Analysts, Investors and Financiers
- Economists and Policy Makers
- Environmental and Social NGOs
- Government Agencies
The global economic crisis is now hitting many developing countries, in some ways worse than during the Great Recession of 2008-2009. We are seeing a decline in the growth of the emerging economies coupled with a reversal of policies as USA and Europe are turning to austerity and budget cuts. We are witnessing declining growth rates in China, India, Brazil and Argentina. In recent months, the currencies of India, Indonesia and Malaysia have also taken a tumble, so much so the market place is concerned about the 3Rs — Rupee, Rupiah & Ringgit. There are also signs of slowdown in foreign inflow of funds.

Having poured US$400 billion into commodities over the past decade, many investors are now selling. Their confidence that risky assets could only float higher on a rising tide of cheap central bank money has crumbled as the global economy fails to respond to the stimulus. Even China, an important buyer of natural resources, is slowing. It is facing an export slowdown and the need to shift to domestic consumption-led growth. Inflation, against which gold in particular is a classic hedge, is falling nearly everywhere. Price pressures will ease further if natural resources, including agricultural commodities, keep falling. That is bad news for exporters of edible oils and fats such as Malaysia, Indonesia, Brazil and Argentina, but good news for net importers.

Over the past decade, oils and fats have witnessed prolific growth on the back of a growing world population, urbanisation coupled with improving purchasing power in the emerging economies. However, given the above scenarios and slow down of exports and lack of demand in the world economies the following critical issues will be examined:

- In commodities – what is the most important challenge to understand? How will the above factors affect the future business environment?
- Considering the current operating risks, where are the best investment opportunities for oilseeds and oils?
- Will oils and fats complex chart new directions in terms of supply, consumption & exports?
- How will labour intensive tree crop plantation companies add value and manage rising costs of production to enhance returns?
- Trade: Have the FTAs enhanced the competitiveness of the oils & fats sector through tariff liberalisation?
- Energy security: How much weight can we put on the bio-energy sector to increase off-take of edible oils?

This module will provide an objective assessment on the current state and future direction of the global oils and fats industry in the context of the demanding environment.

Concerns over climate change are often identified as one of the key sustainability challenges globally. While the release of greenhouse gas (GHG) from combustion of fossil fuels for heat and transportation was the initial focus of the debate, further studies have shown a variety of other anthropogenic activities that have contributed to GHG emissions. For example, the conversion of carbon-rich tropical forests has been identified as an important contributor to the release of CO₂. The Stern Review of 2006 estimated that deforestation contributed to about 18 percent of the global greenhouse gas (GHG) emissions.

With regard to the potential contribution of the palm oil industry to climate change, the areas of concern include emissions of methane gas from palm oil effluent treatment plants, the development of plantations on tropical peat lands which could result in significant GHG emissions and use of fire for land clearing. The recent regional haze pollution episode caused by open burning in Indonesia underscores the significant negative impacts this unsustainable practice has on the environment and human health. While significant progress has been made to reduce the carbon footprint during processing and refining of palm oil and responsible companies have adopted zero burning for land clearing, the sustainability of conversion peat land for oil cultivation remains a contentious issue.

This module will discuss the sustainability of the palm oil industry from 2 perspectives; the first is to learn about advances made in reducing the carbon footprint in the processing and refining palm oil with the view of up-scaling and replicating the new technologies to the whole industry. The second is to re-examine if the use of peat land for palm oil production is a sustainable option.
Addressing major challenges has never been so necessary and urgently required as the Oil Palm Industry moves rapidly forward in the 21st Century.

The traditional drivers of the Oil Palm Industry are from the Up-Streamers (plantation operators), the Down-Streamers (seed crushers, refiners, oleochemical and biofuel manufacturers) and the Marketing and Promotional Players (managing health, environmental and economic issues for fair pricing in the World’s Oils and Fats markets).

Palm Oil Millers being the Mid-Streamers had traditionally developed Milling Technology to match the demands for processing from the up-stream (crop) and the requirements for quality from the down-stream and at the same time to comply with the prevailing Environmental and OSHA regulations.

The Millers face increasing requirements for higher Environmental and OSHA compliances.

Milling performances are also aggravated by plantation manpower shortage which poses issues affecting costs, extractions and palm products quality deteriorations in the milling process.

It is timely that Millers be pro-active in the use of effective new milling technologies.

Equally important, they have to be recognized as one of the drivers addressing the major challenges in the Oil Palm Industry.

- **Ultrasound (Megasonic) Intervention in Milling** - A proven, ready for use technology to assist Mills in the rapid capture of entrapped and emulsified oil mainly from OFF quality and ripeness crop.
- **Retrofit Palm Oil Mills for Methane Avoidance** (Zero POME discharge into water courses) for Value Extracts from Palm Oil Puree (Non-Oil Solid component of Pressed Crude Oil after physical oil recovery from the Vertical Clarifier Tank); utilising effectively innovative matching available thermal and electrical energy resources for the drying process.
- **Zero POME Discharge** (Developing new technologies in extracting oil from undiluted pressed crude oil in decanters followed by combination uses of evaporation, air spray, membrane filtering systems, etc) for the Value Extracts from Palm Oil Puree.
The increase in energy demand worldwide and diminishing fossil fuels reserves have driven the development of sustainable alternative energy resources. Today, the drivers for bioenergy development, besides enhancing commodity prices, are the provision of energy security, mitigation of global warming and climate change. However, the use of bioenergy has been scrutinised from the perspective of sustainability especially with regards to environment, the availability of feedstock taking into account food versus fuel issue as well as technological innovation related to commercial production of bioenergy.

In this context, this module focuses on the challenges and opportunities faced by the bioenergy industry including the advancement in the development of biofuels industry. The trading and marketing of bioenergy will also be discussed in view of the development of sustainability criteria in major importing countries such as the European Union and the United States.

Notwithstanding the above, this module will also highlight the development of the implementation of local biofuel programme in line with the National Biofuel Policy in Malaysia. More importantly, the competitiveness of the bioenergy programme will also be discussed, taking into account that palm oil, the feedstock used in the local biofuel programme contains phytonutrients that can be extracted and can significantly enhance the competitiveness and sustainability of the industry.
In this space age it is possible to design for automation and robotics but R&D will have to be initiated to look into the special needs of oil palm estates. Normally this type of work will need collaboration of industries in robotics and vehicles; with research institutions assisting these efforts.

1. Automation has been successful in mills and processing. In estates some degree of success has been achieved in satellite mapping, remote sensing and remote-controlled surveillance with mini-drones & mini-helicopters to identify problem areas.
2. Harvesting has been a special case for the oil palm. Innovations beyond the Cantas will be helpful for twin needs of productivity and manpower
3. New motorized exoskeletons are now a commercial reality and it is up to the industry to see to further innovations and their cost-effectiveness.
4. Robotics can go beyond enhancing human physical power, there are possibilities of unmanned remote-sensing technology for sensing fruit ripening, unmanned multipurpose vehicles monitoring estates.
5. All terrain vehicles are of special interests; these are available from two wheels to 6 wheels where size will need adaptations to sites specific situations. New types of micro-batteries have been developed for all types of application including vehicles. Transportation perhaps could be tweaked to go beyond the buffalo cart.
6. Forklifts and varieties of accessories (cutting & chain-sawing) could be adapted for harvesting and other needs.

The vitamin E story is a peculiar one. Mankind has not benefited from vitamin E supplementation despite its strong antioxidant property. In fact clinical trials provided clear evidence that α-tocopherol supplements were highly undesirable. Yet policy makers believed that natural α-tocopherol was the only form of vitamin E with relevance to human body. Clearly scientific misjudgment should be addressed without delay.

The increased all-cause mortality in human subjects, shortened lifespan of field voles and higher prostate cancer incidence in human subjects after α-tocopherol supplementation can be explained by the contrary roles of tocopherols (bad vitamin E) and tocotrienols (good vitamin E), and the suppression of tocotrienol uptake due to saturation of α-tocopherol in the liver. Consequently, the control subjects had higher tocotrienols in their bodies than α-tocopherol supplemented subjects. Human clinical trial data supported our hypothesis on the suppression of tocotrienols by α-tocopherol after supplementation with typical tocotrienol-rich fraction. Direct evidence on the antagonistic roles of tocopherols against anticancer properties of tocotrienol further supported our hypothesis. Evidently, there is a need to prevent saturation of α-tocopherol in the liver. This can be achieved by removing α-tocopherol from the tocotrienol-rich fraction. In the present context, α-tocopherol supplementation can be suicidal whereas tocotrienol supplementation is ideal for long-term disease prevention as it has no known adverse side effect.

**TECHNICAL VISIT**

Technical visit to a plantation will be organized for the Congress Delegates. We are sure that the visit will provide invaluable insights to the progress made by palm oil research and development.

**Oils and Fats International Asia 2014 Exhibition**

OFI Asia 2014 is organized by an international organization (Quartz Business Media Ltd) and it will be participated by established international and local equipment manufacturers which will update participants on the latest technology available.

Thus these events will contribute to making Malaysia the Global Hub for Technical and Marketing Information on All Oils and Fats. We shall endeavour to make your participation a fruitful experience in OFIC 2014.
CALL FOR POSTER PAPERS

The 2014 Oils and Fats International Congress (OFIC) will include a poster session to provide a platform for sharing of the latest research findings related to oils and fats in line with the theme of Global Oils & Fats: Addressing Major Challenges.

The poster session enables presenters to share their research findings and innovations in order to obtain feedback through interaction with international audience.

The Organising Committee invites scientists, researchers, undergraduate and post graduate students to submit their extended abstract in English of not less than 400 words with the following format:

- Title of paper
- Author(s), Affiliation(s), Address, Country
- Email address and contact information of corresponding author
- Extended abstract
- References

Abstract of the posters submitted will be reviewed by the Organising Committee and notification of acceptance will be sent to corresponding author.

Good poster papers can be upgraded to module papers subject to judges’ discretion.

Best Poster Award

A best poster award will be given to poster paper that shows high scientific quality and bring forward new ideas, concepts and innovations in addressing issues and challenges in the oils and fats industry.

GUIDELINES FOR POSTER PAPERS

1. A standard poster surface 60 x 90cm is provided.
2. The poster should be clearly read at distance around 1 meter.
3. At the top of the poster, indicate the title and names of authors and organizations.
4. Include the following items on our display: introduction, objectives or goals of the study, methods, key results, discussions, conclusions and if necessary, any acknowledgement of financial support for your research.
5. Graphic illustration such as figures, concise tables and photographs considered essential by the authors could be included.
6. Use tack-and-stick reusable adhesive, mounting tabs, or tape to attach your materials to the board.
7. Authors are required to be present at their poster board during the scheduled times to respond to questions.
8. Each poster will be displayed for the whole three days of the program. Poster viewing and informal discussions will take place during morning and afternoon breaks, as well as the lunch break.

Important date
- Abstract submission deadline: 30 June 2014
- Acceptance notification: 30 August 2014
- Poster setting up: 4 November 2014

Rates:
- Shell Scheme £398 per sqm
- Space only £349 per sqm
- Special rate apply for MOSTA members
- Please add 10% for corner sites and 15% for multi-storey stands

Shell Scheme Price includes:-
- Space with fittings including side and rear panels, lighting, power point, name board, table and two chairs.

For further information, please contact:
Rosalind Priestley
Sales Manager
Quartz Business Media
Quartz House
20, Clarendon Road
Redhill, Surrey, RH1 1QX
England
Tel: +44 (0) 1737 855068
E-mail: rosalindpriestley@quartzltd.co.uk
REGISTRATION FORM

Please complete in Block letters/attach Business Card. This form may be duplicated for additional delegates.

1. DELEGATE’S INFORMATION

Full Name: ________________________________ MOSTA Membership No: __________________________

Title: ____________________________ Designation: ____________________________

Organisation: ____________________________

Address: ____________________________

Tel: ______________________ Fax: ______________________

Email: ______________________________

□ Please tick if vegetarian diet is required

2. REGISTRATION FEES

<table>
<thead>
<tr>
<th></th>
<th>Before 31 July 2014</th>
<th>After 31 July 2014</th>
<th>Total Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Local</td>
<td>Overseas</td>
<td>Local</td>
</tr>
<tr>
<td>Members</td>
<td>RM2,000</td>
<td>USD710</td>
<td>RM2,500</td>
</tr>
<tr>
<td>Non-Members</td>
<td>RM2,300</td>
<td>USD820</td>
<td>RM2,800</td>
</tr>
<tr>
<td>Additional Congress</td>
<td>RM300 (USD110)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dinner Tickets</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students with Posters</td>
<td>RM 600 (USD 210)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Registration Fee for delegate covers the following:

- Lunches and refreshments during OFIC 2014
- Public Forum
- OFIC 2014 Welcome Reception
- OFIC 2014 Congress Dinner
- OFIC 2014 materials and documents
- Technical Visit

3. MODE OF PAYMENT Please tick (✓):

☐ Cheque / Banker’s Draft made payable to “MOSTA”
   (Cheque No: ………………………………..)
☐ Payment by Telegraph Transfer to “MOSTA” Account
   (Please attach the advice slip of the remittance if paid by telegraphic transfer)
☐ Payment and Registration online www.mosta.org.my

Name of Account: MOSTA
Account No: 512530-155068
Swift Code: MBBEMYKL
Name of Bank: Malayan Banking Berhad
Address of Bank: No. 22, Jalan Yong Shook Lin, PJ New Town, 46200 Petaling Jaya, Selangor, Malaysia.

OFIC 2014 Secretariat c/o MOSTA
C-3A-10, 4th Floor, Block C, Damansara Intan, 47400 Petaling Jaya, Selangor, Malaysia.
Tel: +603-7118 2062 / 2064
Fax: +603-71182063
E-mail: mosta.secretariat@gmail.com
Website: http://www.mosta.org.my
(Contact Person: Ms. Michelle Lim)

For office use only:

Date: ______/______/______
Amount: ______________
OR No: ______________
Reg. No: ______________