

# ASIA PALM OIL



PALM OIL INDUSTRY AND TECHNOLOGY NEWS

**Malaysian Downstream  
Palm Oil Players  
Urged to Look Into  
Opportunities in  
Cambodia**

**Malaysian Palm Oil  
Gaining Greater Global  
Acceptance**

**Turning to Automation  
to Ease Foreign Labor  
Dependency**



*Image Source: Nantong Ant Machinery Co., Ltd.*

## **SPECIAL INSIGHTS**

# **Strengthening the Roles of Oil Palm Smallholders**

PP18791/04/2016 (034458)



RM 10/USD 5



[www.asia-palmoil.com](http://www.asia-palmoil.com)

**W**e are at our last issue of 2022! This year has witnessed a few key events; the Russian invasion of Ukraine, the outbreak of the monkeypox, the assassination of Shinzo Abe, Pakistan's massive flood, and much more. Meanwhile, Malaysia is likely to hold its next General Election somewhere around this year, according to the ruling party Barisan Nasional (BN).

According to Chief Minister Datuk Seri Hajiji Noor, to improve productivity and development of the palm oil sector, the Sabah government will amplify the use of technology and innovation. He also stated that the Sabah government has allocated around RM65.97 million to the Industrial Development Ministry to equip the state's industrial sector development.

MPOB has also partnered with two companies to produce value-added oil palm-based products; Sabah Softwoods Hybrid Fertiliser Sdn Bhd which resulted in the production of the GanoEF bio-fertilizer and the Sabah Sustainable Oil Palm Planters Cooperative Consortium to commercialize the technology of oil palm-based cleaning products for the first time in Sabah.




Susan Tricia  
Editor

This is a great opportunity for Sabah as there are no oleochemical factories and the downstream sector is less to little there. This also provides opportunities for palm oil players to set out into commercialization in the downstream palm oil sector there.

On behalf of the editorial team, thank you for your continuous support of Asia Palm Oil Magazine. Stay in touch with us at [www.asia-palmoil.com](http://www.asia-palmoil.com) and follow us on Facebook and LinkedIn for more updates.

Follow us:

 : Asia Palm Oil Magazine

 : Asia Palm Oil Magazine



### PUBLISHER

FBI Publications (M) Sdn. Bhd.

### PUBLICATION MANAGER

Vanny Lim  
[vanny@fireworksbi.com](mailto:vanny@fireworksbi.com)

### MARKETING COMMUNICATION

Nur Izyan binti Dzulkifli  
[izyandzul@fireworksbi.com](mailto:izyandzul@fireworksbi.com)

### ASSISTANT EDITOR

Atthira Zawana  
[atthirah@fireworksbi.com](mailto:atthirah@fireworksbi.com)

### CREATIVE DESIGNER

Muhammad Fadzil  
[design@fireworksbi.com](mailto:design@fireworksbi.com)

### BOARD OF DIRECTORS

Kenny Yong  
Susan Tricia

### OFFICIAL MAGAZINE OF



### MAGAZINE COVER PAGE PICTURE SOURCE

Nantong Ant Machinery Co., Ltd.



FBI Publications (M) Sdn Bhd (1168942-P)  
Unit 9-3, Jalan PJU 5/6, Dataran Sunway, Kota Damansara, 47810 Petaling Jaya, Selangor. | Tel: (+603) 5636 1952

### DISTRIBUTED BY

Central Paper Agencies Sdn Bhd (111330-T)  
11, Jalan SS 13/3C, Subang Jaya Industrial Estate, 47500 Selangor Darul Ehsan.  
Tel: (+603) 5636 1278 / 5636 1358 Fax: (+603) 5636 1952  
Email: [cpa@tm.net.my](mailto:cpa@tm.net.my) Web: [www.centralreader.net](http://www.centralreader.net)

### PRINTED BY

MMS PRINT SHOP (M) SDN. BHD. (1246387-v)  
NO 43G, Jalan PBS 14/2, Taman Perindustrian Bukit Serdang, 43300 Seri Kembangan, Selangor.

Available at the following major bookstore and other outlets:



### ENDORSED & SUPPORTED BY



### DISCLAIMER

The assertions and opinions expressed in articles and announcements on this magazine reflect the views of the author(s) and do not (necessarily) reflect the views of the publisher. Asia Palm Oil Magazine can in no way be held responsible for the content of such views nor can it be held liable for any direct or indirect damage that may arise from such views.

The information in this magazine is regularly supplemented and/or modified. Asia Palm Oil Magazine reserves the right to make any changes with immediate effect and without providing any notice thereof

# CONTENTS

MAGAZINE



18

Turning to Automation to Ease Foreign Labor Dependency



36

Malaysia Palm Oil Gaining Greater Global Acceptance

## > ORGANIZATION NEWS

- 8 - Sarawak Plantation Seems Shielded From Volatile Palm Oil Prices, Says MIDF
- 10 - MPOA: No Growth in CPO Output for the Third Year
- 12 - MPOCC Has Never Endorsed Other Parties to Provide Consultation Services for Palm Oil Dealers - MPIC
- 14 - Palm Tocotrienol Exports Hit RM21.55 Mil in Seven Months — MPOB
- 16 - Turning to Automation to Ease Foreign Labor Dependency

## > INDUSTRY NEWS

- 18 - Malaysia's Palm Oil Output to Improve Fueled by Foreign Labor Intake
- 20 - MPIC Mulls Re-Organizing Oil Palm Smallholders into Clusters
- 22 - Palm Oil Industrial Cluster in Lahad Datu Perfectly Placed As Regional Logistics Hub, Says Ongkili
- 26 - Malaysian Palm Oil Finds New Markets in Europe
- 28 - Sabah Adopting Latest Technology, Innovation to Boost Palm Oil Sector, Says CM
- 30 - Engaging Oil Palm Smallholders a Challenging Process, Says Civil Society Expert
- 32 - Palm Oil Penetrates New Markets, Achieves Greater International Acceptance
- 34 - Palm Oil: Sabah Aims to Be Global Leader
- 36 - Malaysian Palm Oil Gaining Greater Global Acceptance



38

PTPN to Begin Construction for Pilot Red Palm Cooking Oil Factory

## > INTERNATIONAL NEWS

- 38 - PTPN to Begin Construction for Pilot Red Palm Cooking Oil Factory
- 40 - Minister Presses For Public Assistance to Drive Palm Industry's Growth

## > GREEN SOLUTIONS

- 42 - Sabah to Achieve Roundtable on Sustainable Palm Oil Standard.



Alcom.  
We Let The Product Do  
The Talking

> **PLANTERS CORNER**

44 - Asian Farmers Plant To Boost Palm Oil Output, Seedling Shortage Slows Pace

> **REFINERY NEWS**

48 - Malaysian Downstream Palm Oil Players Urged to Look Into Opportunities in Cambodia

> **TECHNOLOGY AND PRODUCT NEWS**

- 50 - ALCOM. We Let The Product Do The Talking.
- 54 - Mills in The 4.0 Era
- 58 - Mitigate Palm Oil Contaminants Effectively With Alfa Laval CPO Washing

> **SPECIAL INSIGHT**

62 - Strengthening the Roles of Oil Palm Smallholders

> **EVENT HIGHLIGHT**

64 - Musim Mas' Program Helps Indonesian Oil Palm Farmers Receive USD 733K



Musim Mas' Program Helps Indonesia Oil Palm Farmers Receive USD 733k



Alfa Laval's separators: Two units of VO30 at Leepang Palm Oil Mill

# Mitigate Palm Oil Contaminants Effectively With Alfa Laval CPO Washing




*IOI Group shares how Alfa Laval's solution and expertise help them mitigate 3-MCPDE and expand their market share into the premium palm oil markets.*

As a leading global integrated and sustainable palm oil player in Malaysia, IOI Corporation Berhad (IOI) has been putting great emphasis on mitigating 3-MCPDE to produce better quality palm oil for the industry. IOI found that CPO washing is the key process in achieving low 3-MCPDE.

In 2019, IOI began to work together with Alfa Laval to reduce the total chloride content in refined palm oil through the Alfa Laval CPO washing process. We speak to IOI Senior Mill Controller, Mr. Raymond, to find out more about this partnership and the achievements so far.

**Can you share with us IOI's experience in working together with Alfa Laval on the mitigation of 3-MCPDE in refined palm oil? When and how it all started?**

IOI's initiative started in June 2017 with the grant application for an industrial trial to mitigate 3-MCPD and GE in palm oil. The grant was approved in Sep 2017 and we entered into a Memorandum of Agreement with the Malaysian Palm Oil Board (MPOB) for this industrial trial in February 2018.

Type of Contaminants	Authorities & Direction	Target & Timeline
Total Chloride (T. Cl)	 Malaysian Palm Oil Board	Malaysian CPO T. Cl < 2 ppm MPOB: 1 Jan 2020 (deferred)
3-MCPD	 European Food Safety Authority   Food and Agriculture Organization of the United Nations	Malaysian Refine Oil Products 3 MCPD  <b>EU Regulation</b> Palm Kernel Oil: < 1.25 ppm Palm Oil: < 2.5 ppm  *Effective date: EU: 1 Jan 2021 MPOB: 1 Jan 2023

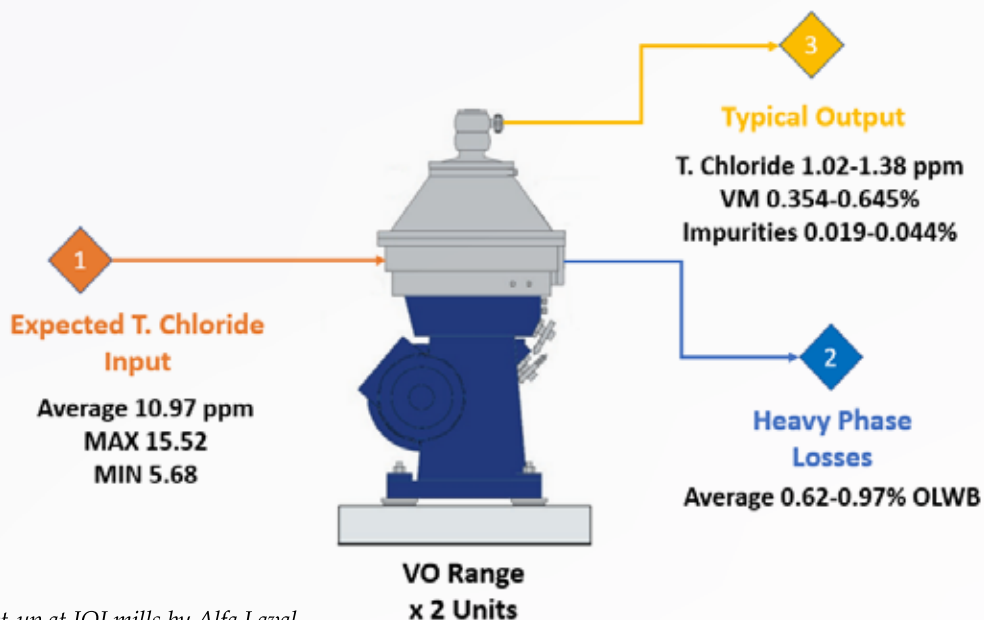
\*Proposed by EU authorities for other refined vegetable oils, fish oils and oils of other marine organisms and mixtures of oils and fats from this category only

In 2019, with sufficient mitigation data from the milling and refining sectors, Malaysia set out a timeline for its millers and refiners to comply with the European legislation on the process contaminant, 3-MCPDE. We started to work with Alfa Laval and commissioned their first plant at Leepang Palm Oil Mill in Aug 2019. By working together with Alfa Laval, we have since commissioned 11 washing plants to date for both IOI Sabah and Peninsular Malaysia.

Alfa Laval's system is practical and easy to operate, as it comes with a PLC system and is capable of automation. Their system design is user-friendly and can be customized to suit our needs. For regular maintenance, the Alfa Laval system and general parts are more common making it easier to service.

**Before the implementation of Alfa Laval's solution, what were the challenges facing IOI in mitigating process contaminants issues?**

The European Food Safety Authority (EFSA) has established a tolerable daily intake (TDI) of 3-MCPD, as the consumption of a higher amount is linked to reduced male fertility and kidney damage. High deodorization temperature during refining leads to the formation of 3-MCPD, and its formation is triggered by the presence of chloride precursor in the CPO. This is why MPOB is taking the lead in introducing chloride limits as one of the specifications in the Malaysian Palm Oil Standard.



Typical separator set-up at IOI mills by Alfa Laval

On 1 July 2020, the maximum level of chloride at 2.00 ppm in CPO came into effect. The limit is a guideline and can be used to negotiate with refiners on the quality of the oil supplied. In order to pre-empt the EU legislation, the palm oil industry must find an effective and reliable mitigation method by July 2020. As chlorides is one of the components that react with oil to form 3-MCPDE, washing CPO with chloride-free water is one of the ways to remove chloride effectively from the mill or refinery.

Based on our case study, it is confirmed that washing fresh CPO before refining results in a reduced level of 3-MCPDE in refined products. Therefore, CPO must be washed in the producing countries instead of receiving country. This ensures that the total chloride can be reduced more effectively and oil quality can be preserved as much as possible.

Another hurdle that we faced was the delivery timeline of the washing separator and setting up of the washing plant within the expected date. However, by Feb 2021, 85% of IOI mills were already equipped with a washing plant. We managed to achieve all of these during the COVID-19 pandemic and the Malaysia Movement Control Order, with full support from Alfa Laval's team.

#### How effective is Alfa Laval's CPO washing in helping IOI to improve its refinery process condition and minimize the 3-MCPDE formation?

On paper, the washing process can achieve more than 80% chloride removal from crude palm oil. At IOI, we were able to achieve on average up to 89.24% (IOI Sabah mills) chloride removal (81.50% - 91.62%).

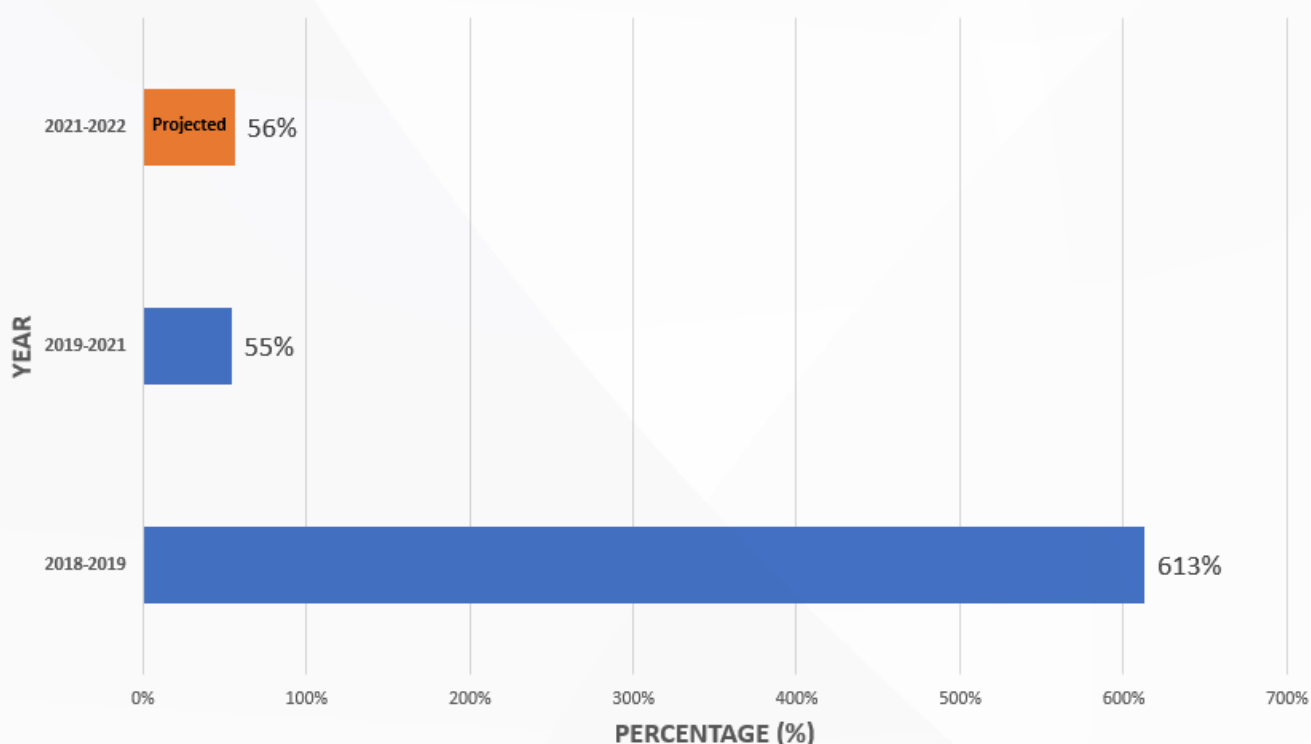
CPO washing process does not react with oil but removes chloride in the moisture content and chloride salts, which are less soluble. Alfa Laval's system has proven that it can minimize yield loss for palm oil mills, which is quite a concern to most of us.

Due to Alfa Laval's expertise, we can maintain our market share in premium palm oil markets such as Europe, the USA, and Japan. We are expecting the market demand for washed CPO to increase in 2022 by 50% year-on-year basis.

#### Why did you choose Alfa Laval as the equipment supplier? What value does Alfa Laval's solution bring to IOI?

Based on our experience, we would like to highlight 'ease of operation' and 'maintenance' as among the advantages of Alfa Laval's system. Once trained, operators and engineers can tap into their PLC system for operational control and data extraction. Besides that, Alfa Laval's support team is responsive and readily open for discussion. Remote troubleshooting can be done through WhatsApp, and communication with the Alfa Laval team is flexible even after working hours.

#### Annual Increase of Shipment Volume by %





<sup>1</sup>PRINCIPAL FORMATION AND MITIGATION STRATEGIES FOR 3-MCPDE IN PALM OIL PROCESSING  
 Chien Lye Chew\* & Norliza Saparin  
 Journal of Oil Palm, Environment & Health 2021, 12:86-95  
<sup>2</sup>Based on IOI's Own Experience

At IOI, we expect Alfa Laval's team to visit on-site if they cannot solve the issue promptly by remote support. After-sales service is based on an 18-month performance agreement. Under this service package, Alfa Laval will provide periodic on-site field service or inspection visits at a pre-agreed interval.

Note: Alfa Laval will be participating in the upcoming PALMEX Medan Indonesia 2022 on 25-27 October 2022. Drop by our booth to learn more about our products and offerings. See you there!

**What is your advice to other palm oil producers seeking to integrate mitigation strategies across palm oil processing to address the 3- MCPDE issue?**

When the expected EU limits are introduced, we should be well prepared. Chlorine, which can come from fertilizers and pesticides, is a precursor in 3-MCPDE formation and millers can help mitigate the formation by washing CPO with water. There are about 50 palm oil refineries in Malaysia, so they can be easily monitored. However, 40% of the country's palm oil is produced by smallholders, who can sell their oil to local independent mills or those belonging to large companies. Therefore, MPOB guidance and enforcement at the national level will be vital for meeting the EU legislation, and at the bigger picture – the global demands on food safety and security.