



PALM OIL AND RUBBER

DEFENDING MALAYSIA'S GLOBAL LEADERSHIP IN COMMODITIES



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The Palm Oil and Rubber NKEAs have provided the platform for the palm oil and rubber industry to move up the value chain. The total export value of palm oil and related products was RM77.8 billion in 2017. The export value of natural rubber and rubber compounds was RM9.36 billion, a significant increase from RM5.89 billion in 2016. The export of local latex was RM17.45 billion, 19% higher than 2016.

The focus in 2017 was strengthening sustainable palm oil production. In this regard, several initiatives were introduced including the mandatory implementation of Malaysia Sustainable Palm Oil certification by end 2019. In addition, progress was made in the integration of palm oil with other activities mostly benefitting the independent smallholders who constitute 17% of the oil palm planted area. This has increased productivity and increased incomes.

I am glad to note that RM132.7 million has been allocated for the planting of 8,557 hectares of rubber in Sabah and Sarawak. Sabah Rubber Industry Board and Sarawak Department of Agriculture will be actively executing the replanting and new planting programme, which has benefited 2,890 smallholders as per the 2017 target.

ENSURING SUSTAINABLE EXTRACTION OF VALUE

Productivity and yield have been identified as focus areas for the NKEA in view of the strong global demand for commodities. Efforts have also focused on improving industry best practices to enhance yield and quality of production to drive exports. This has resulted in the NKEA exceeding its 2020 target of planting and replanting 110,844 hectares of oil palm and 62,000 hectares of rubber. To date, the industry has recorded 126,290 hectares of new planting and replanting of oil palm and 215,634 hectares of new planting and replanting of rubber. The rubber industry had also generally performed well in 2017, as the export of local natural rubber and compound rubber had contributed RM9.36 billion, a vast increase compared to RM5.89 billion last year. Meanwhile, the export of local latex products recorded a revenue of RM17.45 billion, an increase of 19% from 2016.

Activities in 2017 were, however, weighed down by internal and external factors. The crude palm oil (CPO) price has fluctuated between a range of RM2,300 to RM3,300 throughout the year, though it should be noted that CPO price was comparably higher than the price in 2016, which was in the range of RM2,257 to RM3,200.

In addition, the production of fresh fruit bunch (FFB) increased by 18% in 2017 to 101.74 million

tonnes from 86.33 million tonnes in 2016. However, the oil extraction rate (OER) this year has not been at optimum level, at a rate of 19.7% against the 2017 target of 21.5%. The low OER rate is due to three main factors, namely the use of low quality oil palm clones in planting, poor farm planning and infrastructure, and sub-standard harvesting practices, such as the harvesting of unripe fruit.

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The Ministry will mitigate low OER by encouraging the selection of superior, high-yielding seeds as well as high quality oil palm clones for planting. The Ministry is also working on educating planters and harvesters on the best planting, farm management and harvesting practices. With regards to harvesting practices, the Ministry will especially emphasise the long-term value of picking only ripe fruits as opposed to indiscriminately harvesting fruits.

Meanwhile, progress in 2017 for new planting and replanting of oil palm has been slow due to delays in obtaining approval from the Sarawak State Government in using the Native Customary Rights (NCR) land that had been allocated for oil palm plantation. The 2017 target was eventually achieved, however, with 7,982 million hectares of new planting and 4,838 million hectares of replanting recorded for oil palm against the total target of 12,000 hectares. To mitigate any potential delays in new planting and replanting in 2018, land that has been allocated for future oil palm development has been cleared for planting activities.

On the other hand, new planting and replanting of rubber, has met its target of 8,557 hectares this year. For 2018, RM132.7 million has been allocated for the further planting of 8,557 hectares of rubber in Sabah and Sarawak, and is being overseen and executed by Sabah Rubber Industry Board and Sarawak Agriculture Department. A total of 2,890 smallholders are expected to benefit through this programme.



Mature plantation requires new planting.



GROWING THE DOWNSTREAM SECTOR

The NKEA aims to realise the full potential of available downstream opportunities and tap into a more lucrative part of the value chain under the palm oil and rubber sectors. The move of going downstream has been incentivised by a total allocation of RM280 million in grants under the 11th Malaysian Plan. In this respect, the Government is not only assisting the big players but also the small- and medium-sized enterprises (SMEs).

Government grants in the palm oil sector are divided into two categories: the commercialisation grants for companies interested in the development of palm-based food products, health-based products, animal feed and high-value oleo-derivatives; and clinical research grants on the nutritional advantage of palm oil and its phytonutrients.

Progress was made in promoting the benefits of palm oil nutrients such as tocotrienol and carotenoids for commercial consumption, as illustrated by the RM41 million worth of grants committed to 10 projects in the development of palm-based food, health products and animal feed in 2017. Similarly, RM2.7 million worth of grants was committed to three projects in creating high-value oleo-derivatives in 2017. As such, RM97.5 million worth of investments were achieved for the commercialisation of palm oil products in 2017, amounting to a total of RM2.7 billion for 57 projects since year 2011.

With regards to encouraging clinical trials on palm oil phytonutrients and potent oleochemicals, RM11.9 million worth of clinical research grants were awarded in 2017, bringing the total number of grants allocated for clinical trials to RM158.5 million for a total of 16 trials conducted since 2011.

The Ministry of Plantation Industries and Commodities (MPIC) and Malaysian Palm Oil Board (MPOB) will continue to increase its marketing efforts to attract grant applicants. At the same time, MPIC and MPOB will explore strategic coordination with similar government agencies such as the Malaysian Investment Development

Authority (MIDA) and SME Corp to promote the grants further.

In the rubber sector, the Malaysian Rubber Board (MRB) has established standards for Malaysian rubber and rubber products in an effort to increase their export value as well as secure their use domestically. The five standards for Malaysian rubber and rubber products are ISO 3146, ISO 4074:2015, ISO/DIS 20163 and ISO/FDIS 2930. These standards are focused on development testing of rubber products such as polymers, packaging of Technically Specified Rubber (TSR), condoms, compounded rubber, cup lumps and crepe rubber.

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Additionally, support from the Government has enabled local companies to continue an aggressive expansion of Malaysian dry rubber products in the global market, focusing on industrial hoses, rubber automotive parts, re-tread tires and other specialised products.

With the drop in crude oil prices in recent years, petrochemicals have since become a cost competitive alternative to rubber derivatives, in particular ekoprena and pureprena, in the production of various commercial goods. To encourage the use of ekoprena and pureprena, MRB collaborated with six new companies in 2017 to leverage their partnership in encouraging the use of alternative rubber derivatives for rubber product applications. These companies are Silverstone Berhad, M-Xell Chemicals Sdn Bhd, Polymer Engineering Product & Construction Sdn Bhd, Proton Berhad, FT Hose and Mitsubishi Chemical Corporation (MCC) from Japan.

The Government is also poised to step up promotional activities to position ekoprena and pureprena as a green and biodegradable option to improve their marketability, in line with the target to generate more than RM5 billion of total revenue for rubber derivatives by 2020.



The export of local rubber products contributes to national income.

ADVOCATING ENVIRONMENTAL SUSTAINABILITY

Launched in January 2015, the Malaysian Sustainable Palm Oil (MSPO) Certification is a voluntary-based certification scheme implemented by the Malaysian Palm Oil Certification Council (MPOCC), introduced to address concerns about management practices, transparency, compliance with legal requirements, social responsibility, new plantings and the environmental sustainability of the palm oil industry. The certification is awarded to oil palm plantations run by smallholders, companies and corporations, as well as palm oil processing facilities that comply with standards and practices set and adhered to within the global sustainable palm oil industry. Branding with MSPO's standards will thus increase the value and demand of Malaysian palm oil as a premium edible oil, following global demand for sustainably sourced products.

Currently, 30 palm oil mills in Malaysia are certified by MPOCC. In 2017, MPOCC awarded the certification to a total of 296,007 hectares worth of new palm oil areas.

To expedite the implementation of the certification across the Malaysian palm oil industry and consistently elevate the industry to the next level, MSPO certification has been made mandatory to all oil palm plantations in Malaysia by 2019, as the voluntary nature of the certification may have delayed some stakeholders from starting the process. In February 2017, the Ministry had

laid out a compliance timeline for the MSPO certification that will be executed in stages. MPOCC is also in the process of training more qualified and accredited Certifying Bodies (CB) and auditors to improve the certification process and speed up the audit and certification for applicants.

Meanwhile, briefings and dialogue sessions with smallholders, associations and plantation groups were also conducted to sensitise their understanding on the MSPO certification and encourage compliance with the standard. Local smallholders may lack capacity and resources to commit to the lengthy compliance and completion process needed for MSPO certification and are conventionally driven by quantity rather than quality of FFB. To encourage their adherence to MSPO standards, the Government has allocated RM130 million to help smallholders to transition the initial steps towards meeting the requirements for certification as well as helping them bear the costs of the audit and certification processes. At the same time, MPOCC is working with its stakeholders to create the MSPO Supply Chain Standards to ensure strict quality controls for the entire MSPO supply chain. Thus, quality control protocols at the mills and further downstream should impose pressure on smallholders at the upstream to comply with rigid FFB standards, aligned with MSPO certification itself.

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Moving forward, the Ministry will ensure that the MSPO certification achieves international recognition. Palm oil entities that are already certified against the current and internationally recognised Roundtable on Sustainable Palm Oil (RSPO) standards will need to complete MSPO certification by 2018, while palm oil entities without RSPO certification and independent and organised smallholders will need to obtain MSPO certification by 2019. The Ministry is targeting for the MSPO certification to be eventually integrated with the RSPO standards, and for Malaysian palm oil entities to have dual certification of the RSPO and MSPO.

In the area of sustainable energy, five new biogas plants have been completed in 2017. Along with generation of electricity, the plants will contribute towards reducing carbon footprint from palm oil production.



Big demand for healthy snacks

Healthier snacks have been dominating consumer demand trends of late, and one company is working to satisfy this. Haliza Industries Sdn Bhd (HISB) specialises in the production of healthy snacks such as potato chips, cereals, and food seasoning made from organic ingredients. In 2017, thanks to the Commercialisation Grant for the Development of Food and Health-Based products under the Palm Oil and Rubber (POR) NKEA, HISB has been able to expand its offerings to include corn-based snacks.

“In August 2017, we received a grant worth RM2.5 million from the Government, which we matched with our own funding. We used the money to purchase high-technology, fully automated machinery,” said Datin Hajah Nor Haliza, founder of Haliza Industries. “The machines are not available in Malaysia and had to be imported from overseas. Aside from creating higher quality products, the machines also improved our production from 100 kg of cereal per hour to 200 kg of cereal per hour.”

The grant has accelerated business growth, leading to Datin Hajah Nor Haliza forecasting higher revenues. She now plans to expand her workforce from 15 employees to 35 employees by the end of 2018. The proud founder is looking to finalise the procurement of warehouses in China to use as its international distribution hubs. Currently, the company currently exports 90% of its food products to countries such as Saudi Arabia, China, Singapore, Brunei and Japan.

Its success in these countries stem from the large demand for halal-certified products, especially in China and Japan. “We provide the type of quality, halal food products that these markets look for,” says Datin Hajah Nor Haliza, adding that the official website for Haliza Industries (www.haliza.com.my) displays the various licences and certificates awarded to the company. Moving forward, the company plans to enter the American, Australian and New Zealand markets.

HISB’s continued success also relies on its promotion of its nutritious snack food products. The company’s products are not only natural and MSG-free, but also contain a palm-based phytonutrient called tocotrienol, which is linked to health benefits such as improved heart health and a reduced risk of cancer.



Haliza Industries at Halal Fest 2017.

Under the POR NKEA, funding is also provided for clinical research of the nutritional benefits of palm oil and its phytonutrients in the areas of renal disease, neuroprotection, arthritis, cardiovascular diseases, cancer, fatty liver disease, macular degeneration, pancreatic disease, radioprotection and child nutrition.

To promote public awareness on the health benefits of tocotrienol, the 100% Bumiputera-owned company, devoted to healthier snack food products, invites educational institutions and organisations for tours. Interested parties may send requests directly through its website. “In 2017, 64 schools and ten higher educational institutions visited and learned more about tocotrienol, along with other aspects of food production,” said Datin Hajah Nor Haliza, “Along with public education, we hope to increase local distribution as well. We would like our products to be offered in Kedai Rakyat 1Malaysia, petrol stations and supermarkets.”

The founder bears responsibility for creating quality food products and urges other food entrepreneurs to commit to the same vision. In 2018 and beyond, she hopes for additional help and support from government agencies and related private institutions to speed up processes and scale bigger in the domestic and international markets. “We are looking for ways and funding to build more factories and distribution channels to cater to the growing demand,” said Datin Hajah Nor Haliza, sharing priority business strategies for the upcoming years. “We also want to focus on our supply chain and optimise revenue generated from our products.”

With a visionary leader and a growing worldwide demand for halal high quality and nutritious food products, the future of Haliza Industries looks bright.

Malaysia's Journey Towards Zero Biogas Emission by 2020

Biogas, a by-product of the palm oil milling process is produced after palm oil mill effluent (POME) is treated anaerobically to remove organic pollutants. It is a source of renewable energy heavily explored in palm oil-producing nations such as Malaysia, which produced approximately 63.4 million tonnes of POME in 2015. Capturing and using biogas can reduce the palm oil industry's environmental impact and reliance on petroleum-based fuel as well as adding an extra monetisation incentive to millers through the selling of excess energy.

However, endeavours to capture and use biogas as a source of energy can be improved upon, said Dr. Loh Soh Kheang, Head of Energy & Environment Unit within the Engineering and Processing Division in the Malaysian Palm Oil Board (MPOB). Uncaptured biogas releases high levels of methane in the atmosphere – a compound which accelerates global warming. This environmental issue also taints the image of the palm oil industry and reduces the attractiveness of Malaysian palm oil and its products in environmentally-sensitive markets such as the European Union and the United States.

To address this issue, the Palm Oil and Rubber NKEA focused its attention on developing biogas capture or methane avoidance facilities at palm oil mills through one of its projects. This effort has successfully sped up the previously slow adoption of nationwide biogas implementation by palm oil mills – as of December 2016, there are 92 completed biogas plants, with a further nine under construction and an additional 145 in the planning phase. Furthermore, all new and existing mills applying for throughput expansion must include biogas capture or methane avoidance facilities. Facilitating these are various national-level incentives such as the introduction of feed-in-tariff (effective 1 January 2014), Green Technology Financing Scheme and the fiscal incentives for renewable energy. On the international front, as a signatory of the Kyoto Protocol, industry players in Malaysia are able to transform greenhouse gas into cash value through the Clean Development Mechanism.

However, according to Dr. Loh and her team's research paper entitled 'First Report on Malaysia's

experiences and development in biogas capture and utilisation from palm oil mill effluent under the Economic Transformation Programme, current and future perspectives', Malaysia faces many issues and challenges towards a nationwide biogas implementation, due to problems 'relating to technology, finance, governance and grid connectivity'. One such example is cost-effective solutions for biogas capture in Malaysia, which is 'difficult to completely achieve' due to highly volatile processing volumes and extreme weather patterns. Current solutions could not harness POME's full potential. However, there are many areas to explore which may nudge the industry towards the coveted zero-emissions scenario.

For example, there must be more research and development for innovative and creative solutions to biorefinery approaches as 'more often than not there is no one-size-fits-all solution'. There is also a need for a holistic value chain management as the economic viability and sustainability of the project cannot be guaranteed without the establishment of a tangible biogas utilisation aspect. Furthermore, various relevant stakeholders, agencies and renewable energy players currently lack alignment due to 'vested interests and restricted information sharing culture'. More must be done to encourage transparent and continuous experience and knowledge-sharing so the whole ecosystem can advance together.

Going forward, Dr. Loh calls for a more concentrated government effort to process applications, facilitate and coordinate nationwide biogas implementation via a practical one-stop centre. This will hopefully lead to Malaysia's full compliance with national and international sustainability frameworks while tapping and monetising biogas, an abundant source of renewable energy readily available in our palm-rich nation.



Biogas plant is a contributor to the source of electricity to the nation.



MOVING FORWARD ▶▶

New and existing initiatives will continue under the Palm Oil and Rubber NKEA to overcome the fluctuations within the global market, including steps to improve both the upstream and downstream sectors of the palm oil and rubber industries. The NKEA is committed to boost the take-up rates of commercialisation and technology acquisition grants. MPIC and MPOB will continue to engage with industry players interested in expanding to the downstream segment of palm oil through NKEA grants and ramp up promotional efforts to increase grant awareness.

The NKEA will also be working on increasing number of MSPO certification issued to palm oil entities. The MSPO certification, of note, will be crucial in ensuring that the Malaysian palm oil industry is able to present itself as an environmentally friendly industry and hence widen its export base, especially to resistant markets in Europe.
