



PALM OIL & RUBBER

Palm Oil and Rubber NKEA Fact Sheet

As major contributors to the Malaysian economy, the Palm Oil and Rubber NKEA aims to strengthen the industries to deliver RM230.9 billion in GNI by 2020. This will be achieved through eight Entry Point Projects (EPP) for the palm oil industry, which seek to transform the industry's fundamentals along its supply chain, from increasing the productivity of smallholders to increasing capacity expansion of the downstream sector.

The rubber industry meanwhile, has implemented four EPPs designed at building the industry's capacity to allow it to capture a larger share of the global market.

List of Entry Point Projects (EPPs)

EPP 1: Accelerating the Replanting and New Planting of Oil Palm

This EPP aims to accelerate the on-going replanting efforts by plantation companies and smallholders – the backbone of the plantation industry – to replace 449,415 hectares of low-yield, old trees with new, high-yielding seedlings.

This will be achieved by using better planting materials to ensure stability of crop supply and a higher average yield level of 26.2 tonnes per hectare per year by 2020. This will, in turn, assure sufficient domestic supply to drive further growth of the downstream sector.

EPP Champions:

- Malaysian Palm Oil Board
- Rubber Industry Smallholders Development Authority (RISDA)

EPP 2: Improving Fresh Fruit Bunch Yield

This EPP targets to increase the national yield of fresh fruit bunch (FFB) from the current 18.89 tonnes/ha/year to 26 tonnes/ha/year by 2020 through responsible and sustainable palm oil production. This required addressing best plantation practices needs and insufficient economies of scale amongst smallholders, which has resulted in lower yields and smaller harvests in contrast to organised smallholdings and plantation companies. Malaysia's smallholders account for 40% of the country's palm oil plantation area.

Efforts undertaken through this EPP include encouraging smallholders to embrace best practices by adopting the Malaysian Palm Oil Board's Good Agricultural Practices (GAP). Other measures taken under EPP 2 include setting up co-operatives of oil palm planters

across the country to educate and increase awareness of new technologies and best practices.

EPP Champion:

- Malaysian Palm Oil Board

EPP 3: Improving Worker Productivity

This EPP aims to introduce new techniques to smallholders and plantation companies to increase productivity while reducing their overdependence on manual labour.

One initiative undertaken to achieve this comprises the use of the CantasTM harvesting pole, which is equipped with a Diamond Sharpening Tool. CantasTM is a 15-foot long motorised sickle used to harvest oil palm fruits while the Diamond Sharpening Tool is a portable tool that enables harvesters to increase their productivity by 40% due to faster and less frequent sharpening of sickles and chisels.

EPP Champion:

- Malaysian Palm Oil Board

EPP 4: Increasing the Oil Extraction Rate (OER)

This EPP aims to improve the oil extraction rate (OER) from 20.49% in 2009 to 23% by 2020 through proper grading of crops. The presence of 241 Malaysian Palm Oil Board (MPOB) enforcement officers at selected mills will provide advisory and enforcement services on crop quality, helping to ensure a lower amount of poor quality crops sent for processing.

EPP Champion:

- Malaysian Palm Oil Board

EPP 5: Developing Biogas Facilities at Palm Oil Mills

This EPP strives to encourage palm oil millers to capture methane and turn the greenhouse gas into clean energy by installing biogas facilities in all palm oil mills located in Malaysia by 2020. Mills can use the converted methane as electricity for their own consumption while biogas plants that meet certain pre-requisites will feed the excess electricity into the national power grid.

EPP Champion:

- Malaysian Palm Oil Board

EPP 6: Developing High-Value Oleo Derivatives and Bio-Based Chemicals

This EPP will steer production from basic oleo-chemicals to higher-value oleo derivatives, which are greener than petrochemicals. This will also help the downstream segment grow

while insulating the upstream segment from volatile commodity price shocks, as there is a global shift from petrochemicals to environmentally friendly green oleo-chemicals.

EPP Champions:

- IOI Berhad
- KLK Berhad
- Emery Oleochemicals
- Ancom Crop Care Sdn. Bhd.
- ICM Specialty Chemicals
- Carotino Bhd
- Uni Olean Sdn Bhd

EPP 7: Commercialising Second-Generation Biofuels

The palm oil industry generates over 60 million tonnes of oil palm biomass annually in the form of empty fruit bunches (EFBs), trunks and tree fronds. This EPP aims to fast-track the commercialisation of biofuels produced from non-food biomass – commonly referred to as second-generation biofuels – to mitigate fluctuations in coal and oil prices.

The production of biofuels includes bio-oils, which can be used to generate electricity, fire up boilers, and in diesel engines.

EPP Champions:

- Premium Renewable Energy Sdn Bhd

EPP 8: Expediting Growth in Food and Health-Based Segment

This EPP targets to tap into the vast application of palm-based derivatives in food and health-based products. This is to build up the production of *halal*¹ goods, vitamins, plant-based pigments, and resins to balance the sector's dependence on the upstream palm oil segment.

Among derivatives currently focused on through this EPP are tocotrienols, found naturally in palm oil. Part of the Vitamin E family, tocotrienols are used in a wide variety of pharmaceutical and health applications, such as antioxidants. Although it can be found in rice bran, wheat germ and coconut oil, palm oil is the richest source of the nutrient.

This EPP also aims to push for more investment in the sector through a budget allocation of RM75 million by the Government to spearhead innovation and product development in the country.

EPP Champions:

- Universiti Sains Malaysia
- University Malaya Medical Centre
- Ohio State University

¹ Permissible by Islamic law

- MD Anderson Cancer Center
- Davos Life Science Sdn Bhd
- The Royal Marsden
- Commonwealth Scientific and Industrial Research Organisation (CSIRO)
- Cape Peninsula University of Technology

EPP 9.1: Increasing Average National Rubber Productivity

To boost rubber yield in Malaysia, this EPP aims to ensure only high-yielding and quality-planting materials are supplied to smallholders. Measures under this EPP are supported by the Rubber NKEA's implementing agencies, namely RISDA, LIGS (Sabah Rubber Board) and JPS (Department of Irrigation and Drainage Malaysia).

Some initiatives undertaken through this EPP include the verification of clones at source bush nurseries, the establishment of Malaysian Rubber Budwood Centres (MRBC), and the adoption Good Agricultural Practices (GAP). MRBCs supply sufficient quantity of high quality bud-eyes to nurseries to produce planting materials of the recommended clones. In 2011, two MRBCs were established in Kota Tinggi, Johor (30 ha) and Similajau, Sarawak (30 ha) in 2011.

EPP Champion:

- Malaysian Rubber Board

EPP 9.2: Ensuring Sustainability of the Upstream Rubber Industry

This EPP seeks to address the gradual decrease in Malaysia's rubber plantation area by maintaining rubber areas at 1.2 million ha, of which one million ha are tappable. Assuming a productivity of two tonnes/ha/year, the country is targeted to produce two million tonnes of rubber by the year 2020 to support the development of downstream activities.

In addition to ensuring on-going replanting and new planting activities among smallholders, the Government has also increased a replanting grant from RM7,000 to RM9,230 per ha in Peninsular Malaysia. The grant, which was also extended for new planting, was also increased to RM13,500 per ha in Sarawak and RM14,000 per ha in Sabah.

EPP Champions:

- Rubber Industry Smallholders Development Authority
- Malaysian Rubber Board
- Sabah Rubber Board Lembaga Industri Getah Sabah
- Jabatan Pertanian Sarawak

EPP 9.3: Increase World Market Share of Latex Gloves to 65% by 2020

This EPP aims to boost the natural rubber glove industry's global market share from 62% in 2011 to 65% by 2020, growing at 13% per year to maintain Malaysia's dominance as the world's biggest producer of rubber gloves.

EPP Champions:

- Malaysian Rubber Board (MRB)
- Malaysian Rubber Glove Manufacturers Association

EPP 9.4: Commercialising Ekoprena and Pureprena

Through this EPP, FELDA and MARDEC Bhd were licensed by the Malaysian Rubber Board to produce Ekoprena (Epoxidised natural rubber) and Pureprena (Deproteinised natural rubber) with a target capacity of 300,000 tonnes per year by 2020. This is to capitalise on the growing preference for natural and renewable materials over synthetics.

The Government has allocated a RM5 million grant to construct the Ekoprena and Pureprena plant, with the funds also to be used for the plant's promotional activities. This EPP also involves RM125 million investments from the private sector.

EPP Champions:

- Malaysian Rubber Board
- Felda Rubber Industries Sdn Bhd

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