

## OPERATIONS REVIEW



### TROPICAL OILS (PLANTATION, MANUFACTURING AND MERCHANDISING)

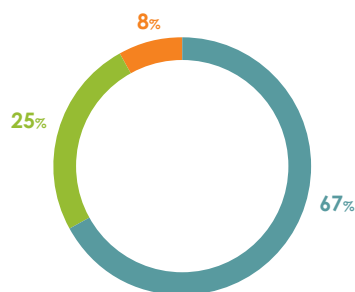
The Tropical Oils (Plantation, Manufacturing and Merchandising) segment comprises the Group's entire value chain of palm oil assets from plantations and palm oil mills to processing, merchandising, branding and distribution of palm oil and laurics related products including oleochemicals, specialty fats and biodiesel.

#### Plantation

We are one of world's largest oil palm plantation owners with a total planted area of 230,409 hectares (ha) as at 31 December 2018. Around 67% of our total planted area in Indonesia, 25% in East Malaysia and 8% in Africa. Through joint ventures, we own plantations in Uganda and West Africa of approximately 46,000 ha. Wilmar also directly manages 35,799 ha under smallholder schemes in Indonesia and Africa, and another 149,000 ha under smallholder and outgrower schemes through the joint ventures and associates in Africa.

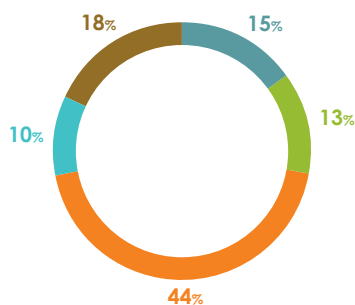
The medium to long-term growth of our plantation operations is supported by the relatively young plantations with an average age of 11 years. Around 53% of the plantations are at the prime production age of seven to 18 years and 29% are at age six years and below.

Plantations Geographic Locations  
as at 31 December 2018



● Indonesia ● Malaysia ● Africa

Plantations Age Profile  
as at 31 December 2018



● 0-3 years ● 4-6 years ● 7-14 years  
● 15-18 years ● >18 years

#### Sustainability

To accelerate our efforts towards a deforestation-free palm oil industry, we issued a Joint Statement in 2018 with Aidenvironment and supporting consumer goods companies detailing our enhanced supplier monitoring and engagement programme.

We announced our second and third sustainability-linked loans with DBS and OCBC Bank which peg the interest rate of our existing facilities to a series of environmental, social and governance performance metrics.

For more information on our sustainability efforts, please refer to the Sustainability chapter.

#### Manufacturing and Merchandising

We are the world's largest processor and merchandiser of palm and lauric oils, processing palm and lauric oils into refined palm oil, specialty fats, oleochemicals and biodiesel. The crude palm and lauric oils are sourced from our own plantations, smallholders under the Plasma and Outgrowers schemes and third-party suppliers.

Through economies of scale and commitment to best practices in production, we have been able to sustain as one of the most cost-efficient producers in the industry. This efficiency is complemented by our strategically located facilities found near the coastal

areas of both origin and destination markets, which enable us to manage transport, logistic and operational costs effectively. Together with an extensive distribution network and sales touchpoints spanning more than 50 countries, Wilmar is well-positioned to capitalise on market intelligence acquired throughout the entire supply chain to meet the ever-changing demands of our customers.

Our activities also include manufacturing, merchandising and distribution of consumer pack branded tropical oils. We are the leading producer and seller in markets such as India, Indonesia, Vietnam, Bangladesh, Sri Lanka and several African countries. In the key locations of India and Indonesia, we have market shares of around 20% and 36% respectively.

During the year, we acquired a 50% equity interest in Nauvu Investments Pte. Ltd. (Nauvu), an investment holding company that invests in integrated palm oil, natural rubber and sugar assets in Africa, from Olam International Limited (Olam). Nauvu was formerly a 50:50 joint venture between Wilmar and Olam. Following the completion of the acquisition, Nauvu is now a wholly-owned subsidiary of Wilmar.

#### Industry Trend In 2018

In 2018, global palm oil production continued to recover, with production growing 6% from 68.2 million MT in 2017 to 72.0 million MT. The two largest producing countries, Indonesia and Malaysia, accounted for about 84% of global palm oil production. Indonesia's production grew 10% to 41.0 million MT and Malaysia's production decreased 2% to 19.5 million MT.

Global demand for palm oil grew 7% to 70.1 million MT in 2018. Demand in Indonesia increased to 11.7 million MT partly due to the expansion of the biodiesel mandate in September 2018. Demand in India decreased 3% to 9.0 million MT, affected by an import tax hike in March 2018. Demand in China increased 6% to 5.4 million MT.

Crude palm oil (CPO) prices were on a general downward trend for most of the year due to higher production output and weaker demand which resulted in record inventory levels. Prices came under further pressure in October 2018 as Malaysia's palm oil inventories hit an eight-month high. However, prices recovered slightly in early December 2018 due to the reduction of CPO export levy in Indonesia and a positive outlook on the Indonesia biodiesel mandate. CPO prices closed at RM2,121 at the end of 2018, down 16% from RM2,532 at the beginning of the year.

### Our Performance

In 2018, pre-tax profit for the Tropical Oils segment increased by 37% to US\$546.1 million from US\$397.5 million in 2017, driven by better performance in the manufacturing and merchandising businesses. Lower commodity prices benefited our downstream businesses through lower feedstock costs. However, this improvement was partially offset by weaker contributions from the plantation business due to lower palm oil prices.

In Plantations, production yield increased by 10% to 21.6 MT per ha in 2018 from 19.7 MT per ha in 2017, resulting in a 7% increase in total fresh fruit bunches production to 4,189,728 MT for the year as a result of favourable weather conditions.

Consistent strong demand for biodiesel and downstream products led total sales volume for the manufacturing and merchandising businesses to increase by 5% to 24.3 million MT. Nevertheless, lower commodity prices during the year resulted in an overall decrease in segment revenue to US\$17.06 billion in 2018 from US\$18.07 billion in 2017.

### Outlook and Strategy

Global palm oil production is expected to increase 4% to 74.4 million MT for the marketing period from October 2018 to September 2019 as production continues to recover.

Demand for palm oil is expected to be supported by the full-year implementation of the expanded biodiesel mandate in Indonesia as well as lower duties on palm imports to India which was announced at the beginning of the year. However, the European Union (EU) has proposed a policy to disqualify the use of high indirect land-use change (ILUC) biofuels by 2030. We believe palm oil-based biofuels will fall into this category. The EU accounts for about 10% of total

palm oil demand and an estimated half of that goes into biodiesel production while the balance goes into the food and chemical industries. There will be an impact on palm oil in general but less so for Wilmar as our participation in this market is limited.

Nevertheless, we remain positive about the long-term prospects of palm oil with the rise of global demand for our food and non-food applications such as oleochemicals and specialty fats.

As at 31 December 2018, the Group has plants located in the following countries:

	Refinery	Oleochemicals	Specialty Fats	Biodiesel
<b>Subsidiaries</b>				
Indonesia	25	4	4	11
Malaysia	15	3	1	2
China	51	10	6	0
Vietnam	4	0	2	0
Europe	0	1	0	0
Africa	2	0	2	0
Others	4	0	1	0
<b>Total no. of plants</b>	<b>101</b>	<b>18</b>	<b>16</b>	<b>13</b>
<b>Total capacity (million MT p.a)</b>	<b>30</b>	<b>2</b>	<b>2</b>	<b>3</b>
<b>Associates</b>				
India	45	3	6	0
China	7	2	3	0
Russia	4	0	1	0
Ukraine	2	0	1	0
Malaysia	3	0	0	0
Africa	10	0	6	0
Bangladesh	2	0	0	0
Europe	6	1	1	0
Indonesia	0	0	0	1
Singapore	0	0	1	0
<b>Total no. of plants</b>	<b>79</b>	<b>6</b>	<b>19</b>	<b>1</b>
<b>Total capacity (million MT p.a)</b>	<b>14</b>	<b>&lt;1</b>	<b>&lt;1</b>	<b>&lt;1</b>

Note: Refinery capacity includes palm oil and soft oils

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### OILSEEDS AND GRAINS (MANUFACTURING & CONSUMER PRODUCTS)

The Oilseeds and Grains segment consists of the processing, merchandising, branding and distribution of a wide range of agricultural products including non-palm and lauric edible oils, oilseeds, flour and rice as well as downstream products such as wheat and rice noodles in consumer pack, medium pack and in bulk.

#### Manufacturing

We are a leading player in oilseed crushing with extensive presence in various parts of the world such as China, India, Vietnam, Malaysia, Russia, Ukraine and Zimbabwe. We crush a wide range of oilseeds including soybean, rapeseed, groundnut, sunflower seed, sesame seed and cotton seed into protein meals and edible oils. The protein meals produced are mainly sold to the animal feed industry while the oils are largely sold to the Group's Consumer Products and Oleochemicals businesses.

We have also expanded our business to include flour and rice milling as well as the production of rice bran oil. We are one of the largest wheat and rice millers in China and own flour mills through joint ventures in Malaysia, Indonesia, India, Vietnam, Thailand and Papua New Guinea.



As at 31 December 2018, the Group has crushing plants and flour and rice mills located in the following countries:

	Crushing	Flour Milling	Rice Milling
<b>Subsidiaries</b>			
China	53	18	18
Malaysia	1	0	0
Vietnam	3	0	0
Indonesia	0	2	1
<b>Total no. of plants</b>	<b>57</b>	<b>20</b>	<b>19</b>
<b>Total capacity (million MT p.a)</b>	<b>25</b>	<b>6</b>	<b>4</b>
<b>Associates</b>			
China	17	1	2
India	17	1	1
Russia	2	0	0
Ukraine	1	0	0
Vietnam	1	4	1
Malaysia	0	9	0
Indonesia	0	2	0
Others	4	4	0
<b>Total no. of plants</b>	<b>42</b>	<b>21</b>	<b>4</b>
<b>Total capacity (million MT p.a)</b>	<b>14</b>	<b>3</b>	<b>&lt;1</b>

Note: Crushing capacity includes oilseeds crushing and rice bran extraction

### Consumer Products

We are the largest producer of consumer pack edible oils in the world (including consumer pack tropical oils), with operations across the globe including China, Indonesia, India, Vietnam, Bangladesh, Sri Lanka and several African countries. We also produce and market rice, flour, and noodles under a diverse brand portfolio. Over the years, we have established a comprehensive sales and distribution network reaching out to traditional retail outlets, supermarkets, convenience stores and hypermarkets. Our consumer brands are renowned for their quality, having won numerous product awards in their respective markets. In China, we have a substantial market share of around 45% for edible oils, helmed by our flagship Arawana brand of products.

Leveraging the extensive distribution and brand awareness from the consumer edible oils and food staples, we have also diversified into the consumer pack flour and rice businesses in China, Indonesia and Papua New Guinea and rice in Bangladesh, Zimbabwe and Ghana as well as flour in Vietnam, Thailand, India and Malaysia.

### Industry Trend in 2018

In 2018, soybean trade flows were significantly impacted by the trade tensions between the United States (US) and China. In July 2018, China imposed 25% tariffs on US imports, including soybeans, in response to tariffs enacted by the US on Chinese goods.

The slowing of China's economy and African Swine Fever affected soybean meal consumption. As a result, soybean imports in China declined 7% from 95.5 million MT in 2017 to 88.7 million MT in 2018, with the bulk of that coming from Brazil. China remained the top importer of soybeans, accounting for approximately 58% of the world's demand in 2018.

On the supply side, good weather in Brazil resulted in a larger soybean crop during the year. However, dry weather conditions in Argentina in the first quarter as well as the import tariff on US soybeans sparked worries over insufficient supply in China, causing disparity between prices of Brazilian and US soybeans. US soybean prices started the year at around US\$9.60 per bushel, hitting a peak of about US\$10.80 per bushel in early March due to heightened concerns over a smaller Argentinian crop. However, prices subsequently retreated to a low of around US\$8.20 per bushel in July ahead of the imposition of the additional tariffs on US soybean imports into China. Soybean prices recovered briefly to about US\$9.00 per bushel at the end of July and remained range-bound for the rest of the year.

In the Consumer Products business, we continued to benefit from healthy demand for branded consumer pack food staples across the countries in which we operate.

### Our Performance

In 2018, the Oilseeds and Grains segment achieved a pre-tax profit of US\$875.0 million, a 20% increase from US\$727.2 million in 2017 on the back of stronger performance from Consumer Products, as well as good crush margins and volume during the year.

Consumer products sales volume improved by 10% from 5.4 million MT to 6.0 million MT. Together with stronger sales from the manufacturing businesses in the earlier part of the year, overall sales volume for the segment increased by 12% from 33.3 million MT to 37.2 million MT. Revenue increased 13% from US\$19.81 billion to US\$22.48 billion.

### Outlook and Strategy

The continued consolidation in the crushing industry is beneficial to us. However, we remain cautious as we continue to monitor key developments in China including the impact of the African Swine Fever and US-China trade negotiations in 2019. The prospect of weaker pork consumption, a shrinking pig population as well as lower soymeal content in animal feed formulation could result in lower utilisation of our crushing plants.

In the Consumer Products business, we will continue to benefit as consumers' preferences shift to quality branded consumer pack products. We will also continue to strengthen our brand image while improving our distribution networks, research and development as well as expanding our portfolio of product to grow our market presence globally.





## OPERATIONS REVIEW



### SUGAR (MILLING, MERCHANDISING, REFINING & CONSUMER PRODUCTS)

Wilmar operates an integrated sugar business across the entire value chain from sugarcane in Australia, India, Myanmar and beet plantations in Morocco to the sweeteners aisle in supermarkets with leading brands such as CSR, Chelsea, Al Kasbah and Madhur. In between, we operate sugar mills, cogeneration plants, ethanol distilleries, and sugar refineries across the globe, linking key origins and destinations through a market-leading merchandising team headquartered in Singapore and supported by key strategic partnerships, such as the joint venture with the leading sugar and ethanol producer, Raízen Energia S.A. in Brazil. We trade about 11.0 million MT of raw and white sugar globally.

In Australia, our sugar business involves sugarcane cultivation, milling and refining to produce white sugar, brown sugar, caster sugar and syrups. We also produce ethanol as well as fertiliser.

We produce around 60% of Australia's raw sugar and our 75%-owned refinery joint venture supplies about 75% of Australia's and New Zealand's refined sugar requirements and also exports to many Asia Pacific markets. We are also Australia's largest generator of renewable electricity from biomass. We own leading sugar brands CSR in Australia and Chelsea in New Zealand. To complement our diversified product and brand portfolio, we also distribute the Equal range of sweeteners.

In Indonesia, we are one of the top three sugar refiners. We operate two refineries in Java with a refining capacity of about 700,000 MT.

In Morocco, we own a significant block of 29.9% (as at December 2018) in Cosumar S.A. (Cosumar) which operates one refinery and seven sugar beet/cane mills as well as the sugar brands Al Kasbah, La Gazelle and



El Bellar. Cosumar is the sole sugar producer in Morocco and the third largest in the African continent, with a strong distribution network that includes exporting refined sugar to neighbouring countries around the Mediterranean Sea and West Africa.

In India, we are the majority controlling shareholder with 58% of Shree Renuka Sugars Limited (SRSL), the leading sugar company in India. SRSL's business comprises seven mills with a total cane crushing capacity of 8.4 million MT per annum, two port-based refineries - one each in Kandla and Haldia - with a combined capacity of 1.8 million MT per annum, a cogeneration capacity of 584 MW as well as the leading sugar brand Madhur.

In Myanmar, we have a majority 55:45 joint venture with Great Wall Food Stuff Industry Company Limited, the leading sugar company. The joint venture operates two sugar mills with a total sugar production of 1.4 million MT, a bio-ethanol plant and an organic compound fertiliser plant.

### Sugar Developments

In March 2018, we made an additional investment in SRSL as part of a comprehensive debt restructuring exercise, bringing our shareholding up to 39%. This triggered an open offer which ultimately resulted in SRSL becoming a 58% indirectly owned subsidiary when the transaction was completed at the end of June 2018. With SRSL's debt at a reduced level after the debt restructuring exercise, we are looking to develop its local core production and distribution businesses as well as to capture international export opportunities with the two refineries located in Kandla and Haldia.

We also acquired Bunge's global book of open sale and purchase contracts for raw and white sugar in August 2018, in line with our plan to expand our global footprint in the sugar merchandising business.

### Industry Trend in 2018

World sugar prices continued to stay weak and remained range-bound, trading between 10.00 US cents per pound and 14.00 US cents per pound in 2018. This was due to an oversupply coming from India, Thailand and Europe and slow global demand due to overstocking. India alone saw a sharp increase in its sugar production to 34.0 million MT.

### Our Performance

In 2018, the Sugar division reported a pre-tax loss of US\$123.0 million compared to a loss of US\$24.6 million in 2017. The loss in 2018 included a non-cash impairment charge of US\$138.6 million relating to our milling operations in Australia. Despite consistent positive cash flow generated from the Australian milling business, the decline in sugar prices in the past year led the Group to take a prudent stance and impair the goodwill and property, plant and equipment of the milling operations. Our results were further impacted by losses from our newly acquired Indian subsidiary, SRSL, whose crushing activities only commenced in late October. These losses were mitigated by stronger performance in the merchandising business during the year.

Sugar sales volume increased 7% to 11.7 million MT in 2018. Nonetheless, weaker sugar prices resulted in a 16% decline in revenue to US\$4.01 billion from US\$4.78 billion in 2017.

### Outlook and Strategy

In 2019, global sugar production is expected to be slightly below consumption. The Brazil sugar and ethanol price parity is currently in favour of ethanol, supported by strong consumption in the past few months. In India, the new ethanol programme should help to divert sugar production to ethanol.

With our competitive portfolio of strategically located and integrated assets, we are well-positioned to leverage the better market conditions expected in 2019.

As at 31 December 2018, the Group has sugar mills and refining plants in the following countries:

	Milling	Refining
<b>Subsidiaries</b>		
Australia	8	2
New Zealand	0	1
Indonesia	0	2
India	7	2
Myanmar	2	0
<b>Total no. of mills/plants</b>	<b>17</b>	<b>7</b>
<b>Total capacity (million MT p.a)</b>	<b>27</b>	<b>4</b>
<b>Associates</b>		
Morocco	7	1
<b>Total no. of mills/plants</b>	<b>7</b>	<b>1</b>
<b>Total capacity (million MT p.a)</b>	<b>4</b>	<b>1</b>





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### FERTILISER

The bulk of the Group's fertiliser business operation and market is in Indonesia. With an annual sales volume of about 2.0 million MT, we are one of the largest fertiliser players in Indonesia.

In addition to having production lines focusing on nitrogen, phosphorus and potassium (NPK) compound fertilisers, we also engage in the trading and distribution of potash, phosphate and nitrogen fertilisers as well as secondary nutrients and trace element products. Supported by extensive logistics networks, the Group has been able to maintain substantial market shares of both potash and NPK in Indonesia, particularly in the oil palm sector. Customers of our fertiliser business are also our suppliers of fresh fruit bunches, crude palm oil and palm kernel, enabling us to tap this captive market and minimise credit risk.

The oil palm sector in Indonesia has experienced remarkable growth in the past decade, resulting in rising demand for fertilisers and providing us with opportunities to continuously expand the business unit. At present, Wilmar's total installed capacity of NPK compound in Indonesia is 1.2 million MT per annum. We are also the appointed distributor of Canadian potash, Peruvian rock phosphate, and USA borate in Indonesia.

We expanded into the Malaysian fertiliser market in the second half of 2015. Our activities there include the manufacturing, trading and warehousing of fertilisers and other related products. We have a 100,000 MT per annum NPK plant and facility in Sabah, East Malaysia. Similar to our approach in Indonesia, this venture complements the Group's activities, particularly in the East Malaysian oil palm market.



### Industry Trend and Our Performance

In 2018, import data showed that regional fertiliser consumption in Indonesia and Malaysia declined by an estimated 9% in volume terms. The decline was mainly contributed by the continued downward pressure on global commodity prices and dampened buying sentiment throughout the year. At the same time, fertiliser prices were generally on a bullish trend, mainly triggered by shortage of supply from origination markets, putting further pressure on affordability. Market conditions were also exacerbated by currency volatilities in the region. Notwithstanding the challenges in 2018, the Group's fertiliser business units maintained a total sales volume of 2.1 million MT, on par with 2017.

### Outlook and Strategy

Given the current market challenges, the Group aims to focus on markets in which we have significant presence and competitive advantage to ensure

achievable and sustained growth. Adjacent to Indonesia and Malaysia being the central core of the fertiliser business, we have been actively exploring other growing markets for fertiliser, capitalising on local channels as well as global networks that the Group has. We maintain a positive view on the long-term outlook of the agricultural sector in the region.



### SHIPPING

The Group owns a fleet of liquid and dry bulk carriers which caters primarily to in-house needs. As part of our integrated business model, this fleet of vessels gives our operations greater flexibility and efficiency. Additional shipping requirements not served by this fleet are met by chartering-in third-party vessels.

In 2018, there was an increase in shipping volumes of liquid bulk and dry bulk from the previous year. Despite challenging market conditions, the shipping unit maintained a respectable profit for the year.

We will continue to seek good opportunities to expand our fleet with more cost-effective vessels to support the needs of our logistics operations.

As at 31 December 2018, the Group owned and managed 65 tankers / dry bulk vessels with a total tonnage of about 2.3 million MT.





## RESEARCH AND DEVELOPMENT

Wilmar's research and development (R&D) activities support our business operations by improving manufacturing processes, ensuring the consistency of existing products, enhancing their quality and developing new innovative products. Our R&D work is carried out by around 450 researchers in various locations worldwide.

In Singapore, Wilmar and the National University of Singapore (NUS) have established a new joint research laboratory to conduct cutting-edge clinical nutrition and synthetic biology research to create healthier food products as well as to devise green production technologies for industrial enzymes and biochemicals.

Officially launched in June 2018, the WIL@NUS Corporate Laboratory will leverage the capabilities of Wilmar and NUS to:

- understand the impact of different food ingredients and foods on human health with focus on pregnant mothers, infants and the elderly;
- address major public health issues through identifying food ingredients and food components capable of modulating glycemic index, lowering triglycerides and cholesterol;
- develop cost-effective and sustainable bio-based methods to produce industrial enzymes and biochemicals; and
- integrate Photonics and Artificial Intelligence (AI) to develop fast methods for detection of food toxins, improving quality control and ensuring food safety.

For food R&D, Wilmar is collaborating with world-class clinical research facilities and medical experts at the NUS Medical School who are advancing our understanding of the role of food in the prevention of metabolic disorders such as Type II diabetes, obesity and cardiovascular conditions.

In China, our R&D facilities in Shanghai and Qinhuangdao focus on developing new technologies and products in areas including cooking oils, specialty fats, proteins, condiments, functional foods, cereals as well as feedstuff.

In Indonesia, our R&D laboratory focuses on biotechnology research to enhance our competitiveness and sustainability in the oil palm industry.

### Major Activities and Achievements in 2018

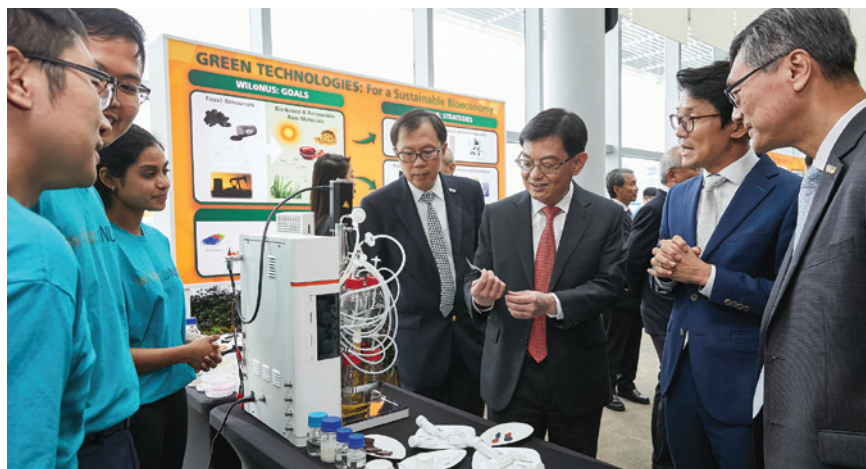
- Started clinical study of designer cooking oil to reduce cholesterol by 10%.
- Engineering and discovery of new lipases for biodiesel and other oleochemical applications.
- Development of yeast and fungal strains for increased enzyme production.
- Modification and improvement of lactic acid bacteria strains for use in animal feed production.
- Developed a novel approach to functionally characterise microbial communities based on low-level Next Generation Sequencing (metagenomics and meta-transcriptomics) data.
- Isolation and characterisation of new microbial strains for oil-cake fermentation to improve digestibility of piglet feed.
- Improved nutraceutical properties of side-stream products from the

processing of oilseeds and grains for functional food applications.

- Developed products designed for an aging population with special nutritional needs
- Arawana rice bran oil awarded the Two-Star International Superior Taste Medal by the Belgium-based International Taste & Quality Institute.
- Developed new products and solutions with functionality improvements in cocoa butter equivalents and substitutes.
- Developed innovative research methods to study the internal quality and application characteristics of wheat and flour products and provide solutions for flour milling plants and food processing customers.
- Developed specialty soy protein products such as vegan burger patties.

### Other Developments

- Established a venture fund with the National Research Foundation to invest in food related technology.
- Collaboration with Associate Professor Dan Yock Young from the National University Hospital on the effect of designer oil on fatty liver and metabolic disorders.
- Established a formulation development lab within the Institute of Chemical and Engineering Sciences, A\*STAR, to expand our footprint in Oleochemicals.



The launch of WIL@NUS Corporate Laboratory was officiated by Mr Heng Swee Keat, Finance Minister and National Research Foundation Chairman (third from right).