

OPERATIONS REVIEW

A GLOBAL INTEGRATED AGRIBUSINESS

At the core of Wilmar's strategy is a resilient business model encompassing the entire value chain of the agricultural commodity business, from origination, processing, merchandising to manufacturing of a wide range of branded consumer products.

Over the years, we have invested substantially in building an integrated agri and food business which gives us economies of scale and operational efficiencies, allowing us to be one of the most 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. We also own a fleet of liquid and dry bulk carriers to support our shipping requirements. As at 31 December 2020, the Group owned and controlled tankers / dry bulk vessels with a total tonnage of about 2.8 million MT.

GLOBAL MANUFACTURING CAPACITIES

As at 31 December 2020, the Group has plants located in the following countries/regions:

	EDIBLE OIL REFINING*	CRUSHING**	SPECIALTY FATS	SUGAR REFINING
SUBSIDIARIES				
China	55	62	6	0
Indonesia	27	0	4	2
Malaysia	16	1	1	0
Vietnam	4	3	2	0
Myanmar	0	0	0	0
Europe	0	0	0	0
Africa	3	2	2	0
Papua New Guinea	0	0	0	0
New Caledonia	0	0	0	0
Australia	0	0	0	2
New Zealand	0	0	0	1
India	0	0	0	2
Others	4	0	1	0
Total no. of plants	109	68	16	7
Total capacity (million MT p.a.)	33	30	2	4
ASSOCIATES				
India	49	19	6	0
China	6	16	3	0
Malaysia	3	0	0	0
Indonesia	0	0	0	0
Singapore	0	0	1	0
Bangladesh	2	0	0	0
Vietnam	0	1	0	0
Thailand	0	0	0	0
Russia	3	2	1	0
Ukraine	2	1	1	0
Europe	6	0	1	0
Africa	8	2	5	1
Total no. of plants	79	41	18	1
Total capacity (million MT p.a.)	14	13	<1	1

* Edible oil refining capacity includes palm oil and soft oils

** Crushing capacity includes oilseeds crushing and rice bran extraction

One of our key assets is our people. We believe we have some of the best people in the industry who have been with us for many years and built the Group to what it is today. Our business partners are another great asset who have contributed to the success of the Group in many countries.

COMPANY DEVELOPMENTS

In 2020, we accelerated our investments especially in China and Indonesia, adding oil refinery, crushing plants, flour mills, rice mills, consumer edible oil, flour and rice packing plants and ships. A major project in China is the Central Kitchen project which we intend to implement in most of our manufacturing complexes. This is the Group's most important project and will contribute significantly to our development in China.

In our sugar business in India, we optimised our existing ethanol capacity and are planning new capacities. We also restarted our Haldia sugar refinery.

	FLOUR MILLING	RICE MILLING	OLEOCHEMICALS	BIODIESEL	SUGAR MILLING
	28	25	10	0	2
	2	2	3	12	0
	0	0	3	2	0
	0	0	0	0	0
	1	0	0	0	2
	0	0	1	0	0
	0	0	0	0	0
	2	0	0	0	0
	1	0	0	0	0
	0	0	0	0	8
	0	0	0	0	0
	0	0	0	0	7
	0	0	0	0	0
	34	27	17	14	19
	11	6	2	4	28
	2	2	3	0	0
	1	2	1	0	0
	8	0	0	0	0
	2	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	4	1	0	0	0
	1	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	1	0	0
	0	1	0	0	7
	18	6	5	0	7
	3	<1	<1	0	4

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FOOD PRODUCTS



This segment comprises the processing, branding and distribution of a wide range of edible food products. These food products are sold in either consumer and medium packaging or in bulk.

We are the largest producer of consumer pack edible oils in the world, with leading positions in China, Indonesia, India, Vietnam, Sri Lanka and several African countries. We also have increasing sales of rice, flour, noodles and condiments under a diverse brand portfolio. Our range of high-quality essential food products enabled us to build leading sales and distribution networks in many countries. Our consumer brands are well-established and renowned for their quality, having won numerous product awards in their respective markets.

Market Trends

The outbreak of Covid-19 and resulting lockdowns around the world saw a shift towards purchases of consumer packed food products for home consumption. The pandemic also led to consumers placing greater emphasis on food safety and quality, which benefited our consumer products business. Even as lockdown restrictions eased in many countries, demand for our consumer products remained steady. However, demand for medium pack and bulk



Flour mill in Gresik, Indonesia

products supplied to hotels, restaurants and catering (HORECA) businesses is still affected by the restrictions imposed in many countries and has yet to return to pre-pandemic levels.

Our Performance

In 2020, the Food Products segment achieved a pre-tax profit of US\$1.15 billion, an 18% increase from US\$974.5 million in 2019, mainly boosted by better margins from the oil, flour and sugar businesses.

As China recovered from the Covid-19 outbreak in the second half of the year, the Group saw a sharp recovery in volume for medium pack and bulk products, as demand from the HORECA sector began to pick up. Consumer products sales volume grew 22% from

7.7 million MT to 9.4 million MT while medium pack and bulk sales increased 7% from 16.6 million MT to 17.8 million MT.

Outlook and Strategy

We will continue to leverage our existing distribution networks, brands and research and development capabilities to create new products to widen our range of food staples. We are also developing superior quality products with higher margin to improve our profitability.

With the gradual easing of Covid-19 restrictions, we anticipate a recovery in the demand of our medium pack and bulk products as HORECA businesses continue to pick up.



We produce a wide range of high-quality essential food products under a diverse brand portfolio.

FEED AND INDUSTRIAL PRODUCTS



This segment comprises the processing, merchandising and distribution of animal feeds, non-edible palm and lauric products, oleochemicals, gas oil and biodiesel.

We operate crushing plants in China, India, Vietnam, Malaysia, Russia, Ukraine, Zimbabwe, Zambia, Tanzania and South Africa. We crush a wide range of oilseeds including soybean, rapeseed, groundnut, sunflower seed, sesame seed, cotton seed, copra and palm kernels. With a growing demand for our downstream products, we continued to expand our soybean and palm kernel crushing capacities during the year.

Oilseeds and Grains - Crushing

Soybean meal demand increased significantly in China with the recovery of the hog population. Total volume of soybeans crushed in China increased 7% from 86.8 million MT in 2019 to 93.0 million MT in 2020. Demand for soybean

meal is also growing in Vietnam and we are expanding our joint venture crushing capacity in the south of Vietnam and planning a new plant in the north.

Tropical Oils

In 2020, Indonesia expanded its biodiesel blending mandate from B20 to B30 with an initial allocation of 8.1 million MT. However, due to low crude oil prices and reduced diesel consumption resulting from Covid-19, Indonesia's biodiesel production declined 4% to 7.2 million MT in 2020 from 7.5 million MT in 2019. Nonetheless, the Indonesian government remains committed to the biodiesel programme and is maintaining its support for the biodiesel programme by increasing the crude palm oil export levy.

Our Performance

In 2020, the Feed and Industrial Products segment achieved a pre-tax profit of US\$795.9 million, a 26% increase from US\$630.3 million in 2019. Overall volume for the segment increased by 11% from 52.4 million MT to 58.1 million MT, mainly driven by improved sales in both oilseeds and grains and



Packing of soy protein concentrate.

sugar businesses. Crushing margins and volume were healthy in 2020, supported by steady recovery in hog production in China. The tropical oils and sugar merchandising businesses performed well during the period. However, the segment was impacted by mark-to-market losses on hedging derivatives in the last quarter of 2020, which will reverse in the coming quarters.

Outlook and Strategy

We expect meat consumption and hence demand for feed ingredients in China to continue to grow in 2021. Soybean imports into China are forecasted to grow to around 100 million MT for 2021.

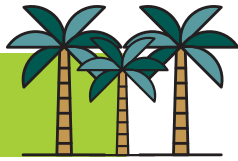
For tropical oils, the Group's palm oil processing business is expected to benefit from the continued support of the Indonesian B30 biodiesel programme.



Crushing plant in Vietnam

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PLANTATION AND SUGAR MILLING



This segment comprises oil palm plantation and sugar milling activities, which include the cultivation and milling of palm oil and sugarcane.

As at 31 December 2020, our total planted area stands at 232,053 hectares (ha). Through joint ventures, we own plantations in Uganda and West Africa totalling approximately 46,000 ha. We also directly manage 35,276 ha under smallholder schemes in Indonesia and Africa, and another 157,515 ha under smallholders schemes through associates in Africa.

In recent years, we took the opportunity of the relatively low palm oil prices to step up our re-planting programme and thus maintaining the average age of our plantations at a relatively young 11 years. This will support the medium to long-term growth of our plantation operations. Around 56% of our plantations are at the prime production age of seven to 18 years and 28% are at age six years and below.

We operate sugar cane and sugar beet mills in Australia, India, Myanmar, China and Morocco. As the largest raw sugar producer in Australia, we supply more than half of the country's raw sugar. Each year we crush about 15 million tonnes of sugarcane to make more than two million tonnes of raw sugar. About 80% of the raw sugar we produce is shipped to overseas markets.

We own 62.5% of Shree Renuka Sugars Limited (SRSL), the leading sugar company in India. SRSL has a cane crushing capacity of 8.4 million MT and ethanol distillery capacity of 160 million litres per annum. In Myanmar, we have a sugar production capacity of 1.4 million MT and a bioethanol plant. In China, we process sugar beet in Inner Mongolia. In Morocco, our associate Cosumar S.A. operates sugar cane/sugar beet mills and a sugar refinery. Cosumar is the sole sugar producer in Morocco and the third largest in the African continent.

Sustainability

We remain steadfast in our commitment to make a positive impact and drive transformation across the industries we are in. With our No Deforestation, No Peat, No Exploitation (NDPE) Policy at the core, we adopt a holistic approach to sustainability which is integrated with our businesses and operations.

In our sugar business, we have started to develop our supplier programme which will initially focus on traceability. We have now expanded our sugar traceability data collection outside of Australia to cover the supplying mill information for our sugar refineries in New Zealand, Indonesia and India.

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

Our Performance

In 2020, pre-tax profit for the Plantation and Sugar Milling segment turned around from a loss of US\$41.3 million in 2019 to a profit of US\$104.8 million, benefitting from firmer palm and sugar prices.

In Palm Plantations, production yield increased by 2% to 20.4 MT per ha in 2020 from 20.1 MT per ha in 2019, resulting in a 3% increase in total fresh fruit bunches production to 4,030,264 MT for the year.

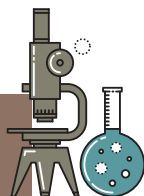
While the recovery of sugar prices in the second half of 2020 improved performance of the sugar milling business, the results were partly offset by a US\$20.0 million impairment of sugar milling assets in India in the first half of 2020. Excluding this non-cash impairment, the sugar milling business broke even for the full year. Sales volume for sugar milling operations decreased by 12% to 3.5 million MT in 2020 due to the timing of sales by our Australian milling operations.

Outlook and Strategy

The segment is expected to benefit from higher palm oil and sugar prices in 2021. Palm oil stocks are expected to remain low as production is expected to recover only in the second half of 2021.

Overall global supply for sugar is expected to be tight due to poorer crop outlook in Europe, Central America and Asia. Global stocks are reaching its lowest level in the past 10 years and should support demand along with imports expected from China, Indonesia and Pakistan. At the same time, corn tightness could become an important supporting factor with positive arbitrage in favour of sugar for corn ethanol and corn starch.

RESEARCH AND DEVELOPMENT



Wilmar's research and development (R&D) activities support our business operations by improving manufacturing processes, ensuring the consistency and enhancing the quality of existing products as well as developing new innovative products.

Our R&D work is carried out by around 600 scientists and researchers in various locations worldwide, including Singapore, China, Indonesia, India, Malaysia, Russia, Australia and New Zealand. In line with the Group's integrated approach, our R&D teams engage in cross-border collaborations as well as with external organisations to share knowledge and resources to enhance the collective R&D effort.

In 2020, as consumers around the world turned to healthier and better quality food products, our R&D teams focused their efforts in the following areas:

Big Data Analysis and Detection Technology

- Significant progress was made in the application of big data analytics and artificial intelligence (AI) in the fields of quality assurance and quality control for identifying oil adulterants in peanut oil and for frying oil formulation.
- Advancement was also made on rapid non-invasive spectroscopy-based detection and quantification technology for relevant analytes in edible oil samples.
- In photonics-AI application, we attained patents and a scientific publication in *Nature Communication*.



Process Technology

- Increased the utilisation of rice by-products from the rice milling process by developing technology that produces food grade rice bran. The multipurpose hypoallergenic food grade rice bran has the benefit of being high in dietary fibre and protein.
- Developed an environmentally friendly fermented rice bran meal (FRBM) by screening of functional microbial strains and application of biotechnology. The functionality and digestibility of the FRBM are notably improved and this has helped to promote better animal gut health.
- Improved food safety control system by developing a fast analysis method which helps to control the risk of microbial contamination after vinegar fermentation. Also screened and improved the function of beneficial microbes in soy sauce fermentation to enhance flavour and stability in soy sauce.

Product Development

- Developed and launched a range of zero-trans fatty acid oils with high retention ratio for vitamin E and phytosterols using green precision minimal processing technology.
- Launched a range of nutritious and healthy wheat flour fortified with multigrain that maintains taste and aroma as well as flour functionality and dough workability.
- Developed low glycemic index multigrain noodles using highland barley, Tartary buckwheat and yam. Evaluation of these noodles on diabetic patients showed initial improvements over existing diabetes diet.
- Developed a series of non-hydrogenated fats for the manufacture of chocolates and non-dairy products.

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- Collaborated with JR Foods to develop ready-to-eat frozen meals, some of which have been launched, for clinical studies and high-performance meals for the ActiveSG platform in Singapore.
- Developed a ketogenic and gluten-free loaf with 21% protein and 3% carbohydrate compared to a normal gluten-free loaf which has 6% protein and 38% carbohydrate. Significant technical improvement has been made to create the loaf while still maintaining great texture and taste.
- Developed and launched a range of bread and wraps that are baked with a unique blend of seeds, grains and a functional ingredient that delivers twice the fibre content of traditional white bread to support gut health. Progressing more research and clinical trials to further develop ingredients and products in the digestive health and wellness space.
- Established a flavour analysis platform which focuses on examining flavour components and the mechanism for flavour formation in various oils. Using technologies which reduce processing time and flavour loss, a new high-end rapeseed oil product was successfully launched during the year. A production line for a new rice bran oil was established in December 2020.
- Launched 10 new flavoured mayonnaise and dressing products in the premium Praise range.
- Conducting extensive quality analysis on 20 high-protein wheat varieties, including modernisation of crop selection, breeding and planting practices which stabilises environmental factors. This combined with strict wheat blending and milling practices produces top-grade high-quality wheat flour.
- The microbiome team isolated beneficial bacteria from fermented foods and identified gut microbes associated with diet intervention that could contribute to product improvement.

Plant-Based Protein/Ingredients

- Developed eco-friendly and cutting-edge technology for soy protein production to reduce waste water while maintaining the functionality of soy protein ingredients.
- Improved the application performance of textured vegetable protein (TVP) to enhance flavour and texture as well as developed a variety of dishes in which meat is partially or completely replaced by TVP.
- Developed plant-based chicken analogues and fat tissue mimics.
- In collaboration with Wilmar Singapore, Greenfarm and JR Foods, our subsidiary Goodman Fielder launched a range of frozen, vegan, microwaveable meal solutions in Australia, packaged in recyclable fibre based trays.

Oleochemicals and Biodiesel

- Expanded production capacity of tertiary fatty amines to supply more disinfectants or their ingredients to combat Covid-19. Solutions were co-developed with China-based Yiling Pharmaceutical.

- Developed a process to transform the waste from epichlorohydrin production to hydrogen chloride.
- Identified several variants of lipases for biodiesel, ester hydrolysis and specialty fats application. A molecular platform was developed for high throughput screening and analysis of enzyme candidates.

Packaging Development

- In Australia and New Zealand, Goodman Fielder removed 100 tonnes per annum of polyvinyl chloride (PVC) from its supply chain, replacing it with recyclable polyethylene terephthalate (PET), including 30 tonnes of recycled PET.
- To vertically integrate the production and lamination of bread bags, trials have been successfully commissioned on bread bags, wraps, coverleaves and die cut dairy lids for staged implementation in April 2021.

Others

- Completed a clinical study that showed Wilmar's blended oils can lower blood cholesterol. The results of the study were published in *Journal of Nutrition*.
- The Wilmar Culinary Institute surveyed more than 18,000 students and parents in Jiangsu, Zhejiang and Shanghai and worked with nutrition experts to develop recipes for 60 sets of student meals to be supplied by Wilmar central kitchens in the future.