

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 2021, the Group owned and controlled tankers / dry bulk vessels with a total tonnage of about 2.6 million MT.

One of our key assets is our people. We believe we have some of the best people in the industry who have stayed with us for many years and built our 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 2021, we continued to invest in our businesses in various countries such as China, Indonesia, India, Malaysia, Vietnam and Papua New Guinea, adding oil refinery, crushing plants, rice bran extraction plant, flour mills, rice mills, consumer edible oil, flour, rice and sugar packing plants, biodiesel plants and specialty fats plant.

In China, our Central Kitchen Food Park project is progressing well with the first facility in Hangzhou completed and in the trial production stage. We plan to build multiple integrated food park complexes throughout the country located within or close to our integrated manufacturing complexes. These central kitchens will enable us to prepare convenient ready-to-eat yet fresh meals which will be distributed efficiently via

our existing extensive network to reach time-strapped and on-the-go consumers. We plan to target institutions such as schools, elder care homes and commercial canteens. The Food Parks will also house suppliers of raw material and other food producers to create a food eco-system where direct access to food ingredients and sharing of common manufacturing facilities will improve production efficiency and product quality.

For our sugar business, our Kandla refinery in India was affected by logistic constraints related to Covid-19 lockdown in the first half of 2021. This led us to initiate an investment programme to improve quality grade, logistics and efficiency, thus lowering cost performance. The benefits of these investments are expected to show in the second half of 2022 and will allow the Kandla refinery to continue to be one of the lowest-cost producers in the country. Through our associate, Cosumar, our new refinery located in Yanbu, Saudi Arabia, started production in July 2021 and is performing in line with technical expectations. Full production will be reached in 2022, with an expected annual production capacity of 700,000 MT. We will also continue our investments in renewable energies.

GLOBAL MANUFACTURING CAPACITIES

As at 31 December 2021, the Group has plants located in 32 countries/regions with the following capacities:

	Subsidiaries Total capacity (million MT p.a.)	Associates Total capacity (million MT p.a.)
Edible Oil Refining*	33	14
Crushing**	31	13
Specialty Fats	2	<1
Sugar Refining	4	1
Flour Milling	14	3
Rice Milling	6	<1
Oleochemicals	2	<1
Biodiesel	5	0
Sugar Milling	28	4

* Edible oil refining capacity includes palm oil and soft oils

** Crushing capacity includes oilseeds crushing and rice bran extraction

OPERATIONS REVIEW



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 have 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

As Covid-19 lockdowns eased in many countries in 2021, there was a reversal of the trends seen in 2020. As more consumers dined out, demand for medium pack and bulk products supplied to hotels, restaurants and catering (HORECA) businesses picked up whilst demand for consumer packed food products dropped.

The pandemic brought about a new normal as consumer buying behaviours evolved, driving an uptake in e-commerce and modern retail channels. Anticipating and adapting to these changes, we have embraced new sales channels such as community group buying and online live sales. At the same time, we are also communicating with consumers through updated brand communication methods.

In 2021, we experienced tightness in vegetable oil supply driven by lower production along with sustained demand due to recovery of the economy and rising biofuel demand. This, in turn, resulted in higher raw material prices.

Our Performance

In 2021, the Food Products segment was impacted by high raw material cost, resulting in a 41% decline in pre-tax profit to US\$680.9 million.

Due to the relaxation of Covid-19 restrictions globally, there was a change in consumer consumption trend which saw consumer products sales volume decline 9% to 8.5 million MT while medium pack and bulk sales volume increased 11% to 19.7 million MT. As more people dined out, we saw stronger demand from the HORECA and food processing industries. We also focused on our rice and flour expansion plans, leading these businesses to record strong volume



New flour mill in Wuhan, China.

growth during the year. The lower rate of decrease in consumer products sales volume in 2H2021 compared to 1H2021 reflected the improvement in our sales activities in the second half of the year.

Outlook & Strategy

We will continue to leverage our existing distribution networks, prominent brands and research and development capabilities to develop new products to widen our range of food products. Over the longer term, as the consumers in various developing countries where we operate in become more affluent and place greater emphasis on food safety and health, we see increasing demand for better quality and healthier products. Through research & product development, the Group continues to develop new products tailored for the individual markets. We are also developing higher margin, superior quality products to improve our profitability. However, in the short term, high commodity prices are expected to impact overall margins.

In China, we expect sales volume to grow as we expand our plants and into central kitchen businesses. We have four projects under construction in Langfang, Xi'an, Chongqing and Zhoukou and our first central kitchen in Hangzhou is currently in the trial production stage.

In India, we expect to see higher demand for branded consumer products in the rural areas as increasing household income results in rising level of brand consciousness and growth in modern retail. For our sugar business, we will continue to expand our leading consumer pack brand "Madhur".

In Indonesia, while demand is expected to remain strong, price caps on cooking oil products are expected to limit the profitability of our consumer products business there this year.

As Covid-19 restrictions gradually ease in more countries, we foresee further recovery in the demand for our medium pack and bulk products as HORECA businesses improve.

OPERATIONS REVIEW



FEED & 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 various countries such as China, India, Vietnam, Malaysia, 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.

Oilseeds & Grains – Crushing

In 2021, demand for soybean meal declined due to higher raw material prices and freight costs as well as weaker hog production margins in China.

Tropical Oils

Crude palm oil (CPO) prices were on an upward trend for most of 2021 due to tight supply for vegetable oils which pushed up prices for competing edible oils as well as higher crude oil prices. CPO prices started the year at RM3,130 and reached a record RM5,071 in October before closing the year at RM4,697, up 50% from the beginning of the year.

Indonesia remained committed to its B30 biodiesel programme with production increasing 2% to approximately 8.6 million kilolitres (kL) in 2021 from 8.5 million kL in 2020.

Our Performance

In 2021, the Feed and Industrial Products segment achieved a pre-tax profit of US\$1.26 billion, a 58% increase from US\$795.9 million in 2020. The growth was on the back of good refining margins and sustained demand for midstream tropical oils products, as well as steady contributions from sugar merchandising activities. Nevertheless, soybean crushing margins were thin during the year as hog farming margins continued to remain weak, resulting in lower demand for soybean meals. Overall volume for the segment decreased from 58.1 million MT in 2020 to 55.0 million MT in 2021 as a result of weaker demand for oilseeds and lower sugar merchandising activities.

Outlook & Strategy

Looking ahead to 2022, soybean crushing will be challenging with high soybean prices and poor hog farming margins in China. Nonetheless, in the longer term, meat consumption and hence demand for feed ingredients in China is projected to continue to trend upwards. Leveraging our



New biodiesel plant in the integrated industrial complex in Serang, Indonesia.

wide distribution and sales network, and close relationships with large-scale feed manufacturers, we believe these advantages will be further reflected as the scale of China's feed industry continues to expand.

On the supply side, dry weather conditions caused by La Nina during the start of the harvesting season in southern Brazil and Argentina have led to concerns over soybean production and crop yields. This is expected to keep prices firm in the near term.

For tropical oils, we expect continued support of the Indonesian biodiesel programme. The government increased its biodiesel allocation from 9.4 million kL in 2021 to 10.2 million kL for 2022, reaffirming its commitment to the biodiesel programme. The government also announced further export curbs, requiring 30% of palm oil exports to be sold domestically at a price cap of Rp9,300/kg for CPO. This is expected to result in a tighter global edible oil supply. Overall, we expect the palm processing business to perform well in 2022.



PLANTATION & SUGAR MILLING



Ethanol plant in Athani, India.

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

As at 31 December 2021, our total planted area stands at 230,480 hectares (ha). Through joint ventures, we own plantations in Uganda and West Africa totalling approximately 46,000 ha. Wilmar also directly manages 35,682 ha under smallholder schemes in Indonesia and Africa, and another 157,515 ha under smallholders schemes through associates in Africa.

In recent years, we stepped up our re-planting programme and thus maintaining the average age of our plantations at a relatively young 12 years. This will support the medium to long-term growth of our plantation operations. Around 58% of the plantations are at the prime production age of seven to 18 years and 26% are at age six years and below.

We operate sugar cane and sugar beet mills in Australia, India, Myanmar, China and Morocco. We are Australia's largest raw sugar producer accounting for more than half of Australia'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.

Our associate in Morocco, 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. In Myanmar, we have a total sugar production capacity of 1.4 million MT and a bioethanol plant. In China, we process sugar beet in Inner Mongolia.

Sustainability

As one of the world's leading sugar players, we understand the importance of including our sugar supply chain in our sustainability approach. In September 2021, we launched our No Deforestation, No People Exploitation Sugar Policy which is aligned with and serves as an extension of our original No Deforestation, No Peat, No Exploitation Policy that was first launched in 2013 and focuses on the palm oil supply chain.

We recognise the critical role we play in driving change and transformation in the industry. In November 2021, we issued a joint statement at the World Leaders' Summit on Forests and Land Use at COP26 pledging our commitment to a sectoral roadmap for enhanced supply chain action that is consistent with a 1.5°C pathway to be achieved by COP27.

For more information on our sustainability efforts, please refer to the Environmental, Social and Governance chapter.

Our Performance

In 2021, the Plantation and Sugar Milling segment's pre-tax profit increased by more than five times, from US\$104.8 million to US\$564.1 million on the back of firmer palm oil and sugar prices and absence of impairment of sugar milling assets in India.

In palm plantations, unfavourable weather conditions impacted oil palm production during the year and production yield decreased by 4% to 19.6 MT per hectare in 2021. This led to a 1% decrease in fresh fruit bunches production to 4.0 million MT for the year.

Sales volume for sugar milling operations decreased by 6% to 3.3 million MT in 2021, affected by weaker demand in first half of the year. Nevertheless, our sugar milling business in Australia had a record year, benefiting from high international sugar crop pricing and record Far-East premium. Overall, 2021 was a strong year for this division.

Outlook & Strategy

With expectation of palm oil stocks remaining low as global palm oil production is projected to recover only in the second half of 2022, coupled with the announcement of export restrictions by the Indonesian government, palm oil prices are expected to remain supported in 2022.

The sugar milling business is expected to benefit from the Indian ethanol programme and production expansion in SRSL as well as firm sugar prices. We will also continue to expand in renewable energies.

With strong crude oil prices, we expect ethanol demand to increase globally, especially in Brazil. We will continue to monitor the Brazil sugar crop allocation between sugar and ethanol as we expect it to be the crucial driver determining final sugar supply and demand.

OPERATIONS REVIEW



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 scientists and researchers in various locations worldwide, including Singapore, China, Indonesia, India, Malaysia, Australia and New Zealand. In line with the Group's integrated and sustainable 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 2021, our R&D teams focused on the following areas:

Environment and Sustainability

1. Future-proofing our production processes by shifting to clean and green technologies has been a priority for Wilmar in recent years, especially in the areas of chemical manufacturing, production of food, feed and consumer goods. We strive to produce sustainably and reduce our environmental impact by focusing research activities on the application of micro-organisms and enzymes as biocatalysts to replace traditional chemical processes:
 - a. Improve solvent tolerance and thermostability of enzymes for biodiesel and specialty fat production.
 - b. Develop in-house immobilisation process to prolong enzyme's shelf life and improve thermostability.
 - c. Optimise *Pichia pastoris* strain for improved production and stability of recombinant enzymes.
 - d. Engineer enzyme for enzymatic synthesis of biosurfactant.
 - e. Develop enzymatic degumming and interesterification technologies to reduce waste water and gases from the cooking oil production process.
2. Develop plant-based ingredients to reduce the use of animal-based products in the food industry:
 - a. Launched a variety of plant-based meat products in China and planning to develop more plant-based Chinese dishes in 2022.
 - b. Develop plant-based seafood analogues, hybrid products (meat and plant-based blends) and plant-based fat tissue mimic.
3. Explore the efficiency of black soldier fly larvae for biomass and feed meal upcycling and valorisation.
4. Develop green analytical technologies that reduce or eliminate the use of toxic chemicals and that can be applied in real time.
5. Launch aromatic rice bran oil which is produced using a new fractionation process that improves the yield and quality of the oil.
6. Develop a more efficient and cost-effective method to remove toxic substances from peanut meal.
7. Develop a new process of waste oil recovery and regeneration for spent bleaching earth.
8. Molecular assisted breeding and clonal propagation of oil palm focusing on the identification of high yield and Ganoderma tolerant palm.





9. Commitment to sustainable packaging by Goodman Fielder:
 - a. Praise Mayonnaise, Praise Whole Egg Mayonnaise and Praise Aioli jars are manufactured using 100% Australian recycled plastic material. In addition, all bottles, jars and lids are recyclable. This initiative will eliminate the usage of 380 tonnes of virgin PET each year.
 - b. Commercialisation of cardboard bread tags in Australia and New Zealand. This initiative will prevent the use of 326 million plastic tags, equivalent to 120.7 tonnes of polystyrene going to landfill each year.
 - c. Meadow Fresh was the first milk manufacturer in New Zealand to include the use of recycled high-density polyethylene (rHDPE). Meadow Fresh 1L and 2L milk now use 30% rHDPE in each bottle, eliminating the usage of 250 tonnes of virgin HDPE each year.

Social

1. We are focusing on improving the health and well-being of individuals through these initiatives:
 - a. Conduct nutritional trials and microbiome studies to understand the effect of diet interventions on prediabetes, ectopic fats accumulation and non-alcoholic steatohepatitis (a form of fatty liver disease).
 - b. Develop ready-to-eat frozen meals that are of high-plant components or nutritionally controlled.
 - c. Formulate oil blends that are healthy and suitable for long-time frying.
 - d. Develop an analytical method that allows the identification of exotic fats in breast milk that are essential for infant's healthy development and can be used in infant formula milk.
 - e. Develop a blended oil that improves blood sugar metabolism and boosts immunity.
 - f. Develop a plant-based butter substitute with 30% higher polyunsaturated fatty acid content. It received the "New Food Material Innovation" award at the 23rd Bakery China 2021 awards.
 - g. Develop a series of baking fats with 50% lower saturated fatty acids than traditional baking fats, using the oleo-gel technology.
 - h. Expand noodle product range with healthier options such as fortified noodles, fermented buckwheat noodles and multigrain noodles that aim to control blood sugar.
 - i. Improve shelf life of wheat products with technology upgrades while maintaining their nutritional profile.
 - j. Reformulate Goodman Fielder's Wonder range of breads by increases in fibre and reductions in sodium levels, resulting in an improvement in the Australian Health Star Rating from 4 to 4.5 (out of 5).

Governance

1. Food quality and safety testing covers the whole process of raw materials acquisition, production, processing and transportation. We have developed a series of rapid detection technologies for oils and grains by combining artificial intelligence and spectroscopy technologies, such as:
 - a. Big data analytics model for checking of oil adulteration.
 - b. Identification of rice seed adulteration in contract farming.