

OPERATIONS REVIEW



PLANTATION AND PALM OIL MILLS

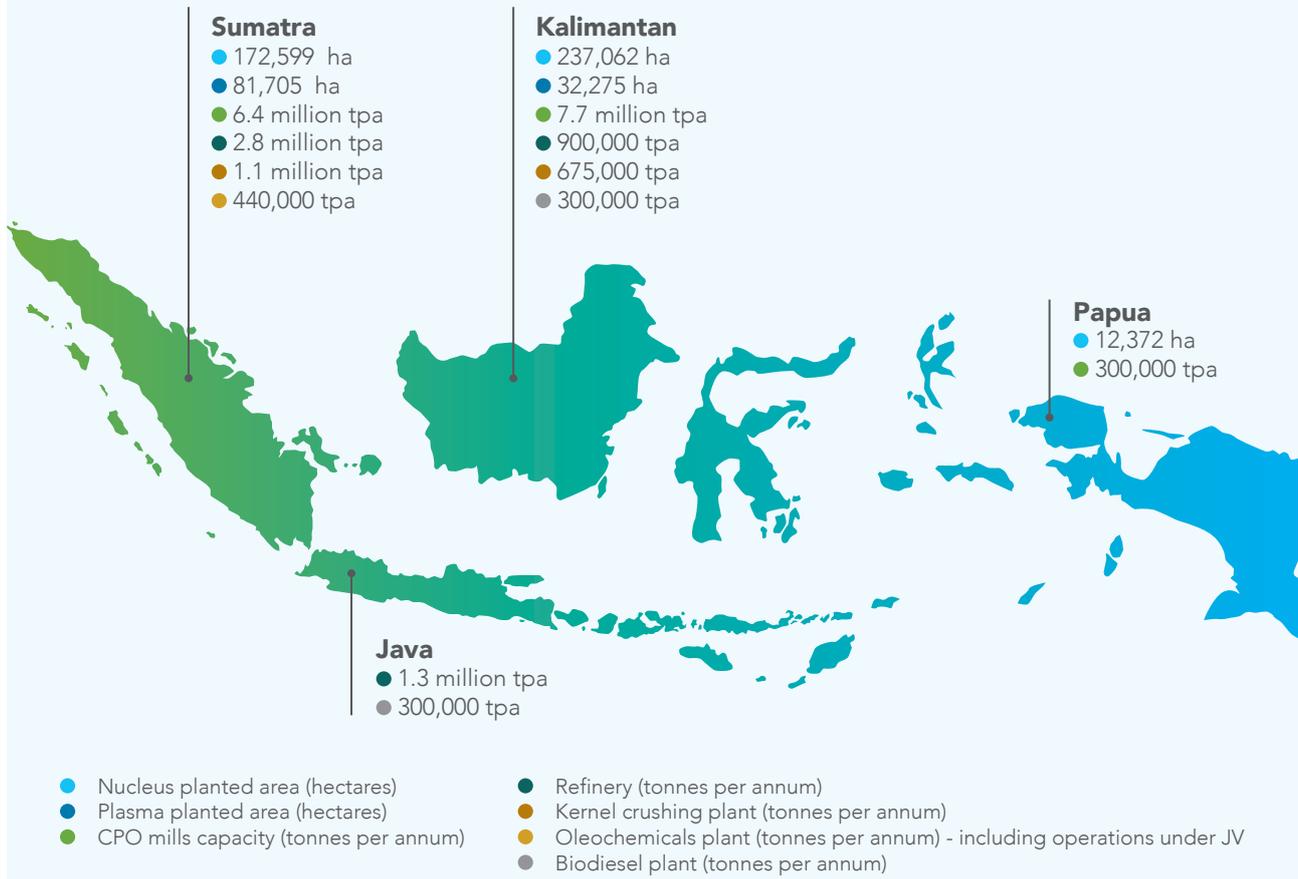
Leading Oil Palm Plantation Group in Indonesia with Continuous Improvement in Operational Excellence

Golden Agri-Resources Ltd and its subsidiaries (GAR or the Company) is the leading oil palm plantation group

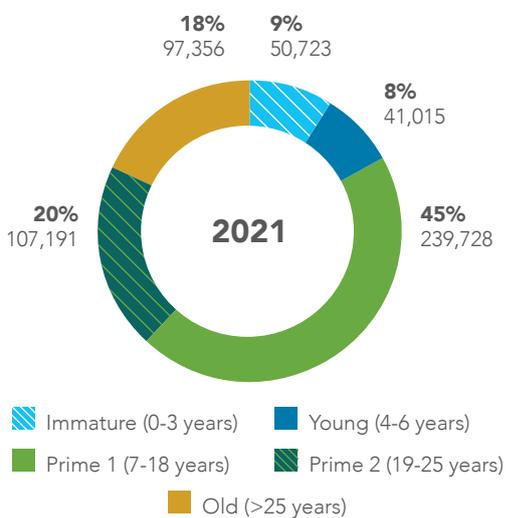
in Indonesia with estates spanning from east to west across the archipelago. As at 31 December 2021, the Company manages oil palm estates with total planted area of 536,013 hectares. The composition of estates owned by GAR (called 'nucleus') and estates owned by smallholders (called 'plasma') was 79 percent and 21 percent, respectively.

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Geographical mix of our operations in Indonesia



Plantations by age profile (hectares)



Of the 536,013 planted hectares, 65 percent is in the prime age segment of 7 to 25 years that generates the highest yields. Due to our accelerated replanting programme over the past few years, the immature and young age segments of up to 6 years totalled 91,738 hectares, expanding by five percent from the previous year. The replanted and younger estates use next-generation, higher-yielding planting materials that will further boost the growth of GAR's production in the future. Replanting during the current year reached 14,200 hectares. As a result, we maintained the average age of our estates at 16 years, providing a solid foundation for GAR's near to medium term growth.

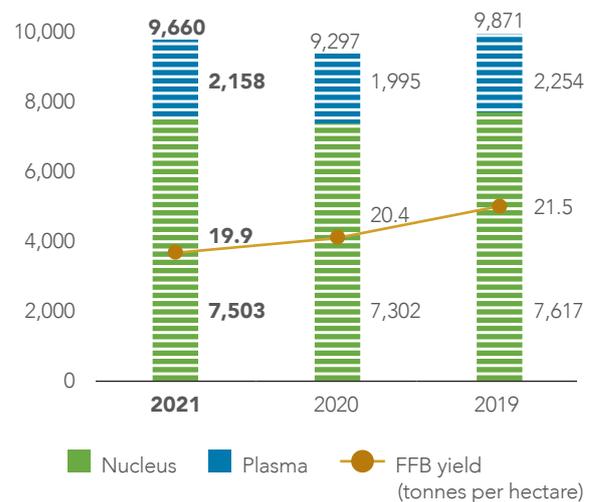
GAR's estates are among the largest and best managed plantations in the industry with leading productivity and cost efficiency. Our large-scale operations are well supported by our advanced information technology system and world-class oil palm research and development centre SMART Research Institute (SMARTRI). Our state-of-the-art information technology system enables management to make decisions with complete factual input in a timely manner and to gather highly detailed information as if on-site at each of our plantations. SMARTRI plays an essential role in sustaining our high productivity, searching for innovative solutions, and providing recommendations for continual improvement in productivity, efficiency, and environmental sustainability. SMARTRI is accredited with ISO 9001 for quality management and ISO 17025 for excellent implementation of general requirements for testing and calibrating laboratories.

2021 Plantation Output Grew After Strong Harvest in First Half

The post-drought production recovery reached its peak in first half of the year and followed by a tree recuperation cycle in the second semester. Harvested fresh fruit bunches (FFB) in the current year grew by four percent to 9.66 million tonnes with average fruit yield of 19.9 tonnes per hectare. The harvested FFB are processed in owned milling facilities, which are strategically located near the plantations, to produce CPO and palm kernel (PK). GAR operates 49 mills with a combined installed annual capacity of 14.42 million tonnes, an expansion by 400 thousand tonnes from the previous year.

In line with larger harvested FFB, palm product output of the mills increased to 2.96 million tonnes, comprising 2.35 million tonnes of CPO and 611 thousand tonnes of PK. Average palm product yield reached 5.4 tonnes per hectare, with oil and kernel extraction rates standing at 21.4 percent and 5.6 percent, respectively. With best-in-class plantation management, our estate performance metrics are above the industry average.

Fresh fruit bunch output
('000 tonnes, except for FFB yield)



Palm product output
('000 tonnes, except for palm product yield)



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Plantation Investment in Liberia

We have invested in Africa through The Verdant Fund LP, a private equity fund that owns Golden Veroleum (Liberia) Inc (GVL). The Liberian government has granted GVL a concession to develop land for oil palm plantations. As of 31 December 2021, GVL's planted area stood at approximately 19,000 hectares and includes a palm oil mill. GVL follows sustainable development practices as laid out in the GAR Social and Environmental Policy. GVL is also a member of the Roundtable of Sustainable Palm Oil and adheres to its Principles and Criteria.

The operations of GVL remain adversely impacted by the continuing poor state of supporting infrastructure and supply chain issues, which has resulted in below standard yields and higher production cost. Liberia's economic performance has been struggling since the devastating Ebola outbreak in 2014. With the COVID-19 pandemic, Liberia's overall economic condition has further deteriorated. Withstanding the operating challenges, we continue to explore options to turn around and improve their performance.

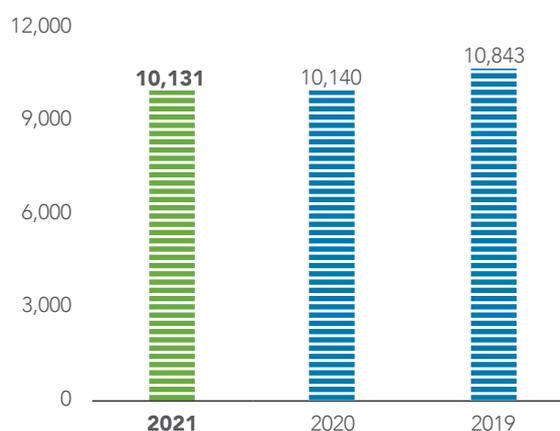
PALM, LAURICS AND OTHERS

Efficient and Traceable Sourcing, End-to-end Processing and Distribution Facilities

Most of the CPO and PK produced are further processed in GAR's end-to-end processing facilities, which employ state-of-the-art technology and are strategically located in Indonesia; close to ports, consumer markets and our plantations. These facilities are supported by efficient and traceable sourcing of raw materials from our own plantations and third parties. Most of these facilities have been acknowledged for their quality both domestically and internationally, and accredited by certifications such as ISO 22000, FSSC, KOSHER, GMP+B2, RSPO, ISCC, Halal and many others.

We operated a total of almost five million tonnes per annum refineries and 1.76 million tonnes per annum kernel crushing plants in Indonesia with

Sales volume of palm, laurics and others segment ('000 tonnes)



average utilisation rate of 99 percent and 86 percent, respectively. We managed to almost fully utilise our refineries with more refined products sold during the current year. Our biodiesel plants continued to maintain their full utilisation of their 600 thousand tonnes annual capacity, contributing to the fulfilment of the B30 biodiesel mandate in Indonesia. Including our joint venture with CEPSA Quimica, S.A., our 440 thousand tonnes oleochemical plants produce fatty acids, fatty alcohol, and glycerine supported by many international certifications. GAR has been able to meet the various requirements of customers by offering an extensive portfolio of refined products in terms of formulations, quality specifications, and sustainability certifications.

Offering Customer Solutions with Broad Product Portfolio and Destination Shipments

We market our products in bulk, industrial and branded form, domestically as well as in international markets. Including the soybean and sunflower oil business in China and India, total volume handled during 2021 maintained at 10.1 million tonnes underpinned by sales volume recovery in the second half of the year. We saw positive market developments with gradual easing of pandemic restrictions and improved global logistics conditions.

Our research and development plays an important role in developing new product alternatives to meet evolving customer preferences towards health-friendly and sustainability-produced products. We continually extend our capabilities and shift the product mix to higher value-added products. By end 2021, we have completed the enhancement of all our refineries with ability to produce low 3-MCPD (3-monochloro-propanediol esters) refined products. In addition to that, two of our refineries have been equipped with capability to produce low GE (glycidyl esters) refined products.

In the local Indonesia market, we have consolidated our efforts to better position and expand distribution coverage of our branded products, especially cooking oils. For the industrial market, we have focused on margarine, shortening and specialty fats, as well as strengthening our relationships with customers to produce better margin. With good track record in delivery of our domestic biodiesel supporting the Indonesian B30 mandate, we received additional volume allocation totaling 745 thousand kilo litres during 2021. For 2022, the volume allocated to GAR is further expanded by four percent to 774 thousand kilo litres. We are in the process of expanding our biodiesel capacity by 1,500 tonnes per day in South Kalimantan.

In the international markets, we have brought our products to approximately 100 countries with emphasis on the growing markets in Europe, China, India, Pakistan, the Middle East and the United States. We mostly sold in bulk, in addition to industrial and branded products.

We have our owned fleet and efficient logistic and distribution infrastructure, including strategically located bulking stations, warehouses as well as owned jetty and port facilities. Golden-Agri Stena Pte. Ltd., our joint venture in global transportation, also plays a significant role in extending our distribution and logistics capabilities to supply our products to consumers worldwide. Our



destination business has further strengthened with the joint venture between Golden-Agri Stena Pte. Ltd. and Bay Crest Management established in 2018. With international sales representative offices and ex-tank operations in many large consuming countries, our destination sales contributed 78 percent to our export volume during 2021.

In addition, we have destination processing in China and India, the two largest consumers of edible oils. In Ningbo, China, GAR operates a crushing facility with an annual capacity of 809 thousand tonnes producing soybean meal and crude soybean oil that is, in turn, processed in our 175 thousand tonnes refinery together with other vegetable oils, mainly palm oil. GAR also operates a deep-sea port and storage facility for oils and grains, which performed well during the current year. This year, we expanded our refinery capacity in India to 863 thousand tonnes to cater to more demand. The refined products are sold locally in the southern part of India and Odisha, under reputable brands through an extensive and well-established distribution network.

Our downstream operations are judiciously managed through a centralised and independent risk management team supporting clear governance. The risk management team follows a prudent and systematic approach to market risk management in line with industry best practices.