

Navigating Challenges in the Palm Oil Industry: Sime Darby Plantation's Strategic Response to the COVID-19 Pandemic

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Abstract:- This paper explores the impact of the COVID-19 pandemic on Sime Darby Plantation Berhad (SDP), the world's largest producer of certified sustainable palm oil (CSPO). With a significant reliance on foreign labor, SDP faced substantial challenges due to border closures and movement restrictions imposed during the pandemic. The analysis focuses on the labor shortage, decreased production, and fluctuating global demand for palm oil. It also examines the measures SDP implemented to mitigate these challenges, including enhanced safety protocols, recruitment of local workers, and efforts to reduce dependency on manual labor through increased automation and mechanization. The evaluation of these strategies highlights their short-term effectiveness and potential long-term sustainability. The paper concludes by emphasizing the importance of technological innovation in overcoming labor shortages and ensuring SDP's continued growth and leadership in the palm oil industry.

I. INTRODUCTION

Sime Darby Plantation Berhad Malaysia (SDP) is the world's leading and largest producer of certified sustainable palm oil (CSPO), with an annual production of 1.887 million metric tonnes and vast land resources. Operating for over two centuries, SDP has a presence in over 90 countries and employs over 80,000 talents globally to produce high quality products catering to a global clientele. The company focuses on ethical farming and a responsible working environment. To fulfill global demands for high-quality CPO that is environmentally friendly, SDP's mission is to innovate and engage in sustainable business practices. According to Elengoe (2020), the Malaysian government enacted the Movement Control Order in an effort to stop the spread of COVID-19 that has struck Malaysia in early 2020. Companies in Malaysia have been making active efforts to improve the health of their workers and production efficiencies in response to the challenges brought by the COVID-19 pandemic. SDP, a frontrunner in the plantation industry, plays a significant role in the achievement of both outstanding performance and long-term sustainable development in light of the difficulties brought by the pandemic.

This report begins by conducting an analysis of the challenges encountered by SDP during COVID-19. These challenges include a lack of labor and decreased product demand, both of which led to decreased production. Second, based on the issues that have arisen, we provide corresponding measures, which include decreasing reliance on foreign workers and hiring more local workers; measures to protect the health of workers; providing adequate housing and a working environment; improving sanitation facilities that have been implemented; and finally, we propose that SDP should decrease reliance on manual labor; increase the level of automation; and increase economies of scale.

II. LITERATURE REVIEW

The COVID-19 pandemic hit SDP especially hard because Malaysia's palm oil plantations rely heavily on foreign labor. The Malaysian Palm Oil Board stated in 2020, that 80-85% of the workforce in the palm oil plantation industry is foreigners, which is around 265,000 people (Azmi & David, 2020). So naturally SDP has a significant amount of workforce from foreign countries, in which according to Chu (2022), 75% of its workforce is made up of employees from foreign countries. The Malaysian government, like many other countries, chose to close its borders during the COVID-19 pandemic to reduce the risk of disease transmission. The closing of the country's border happened on the 16th of March 2020 after over 500 confirmed cases of COVID-19 were reported in Malaysia (Crisis24, 2020). Stricter movement restrictions and standard operating procedures have frozen the entry of foreign workers and prevented those who left Malaysia to return to their working positions (Idris, 2021). SDP has reported the first case of employee testing positive for COVID-19 on the 16th of March 2020 and there was a shortage of 75,000 workers which resulted in a potential hit of 20%-30% to the production side of the company (Chu, 2022). Poo and Surendran (2021) also stated that 3.4 million tonnes of CPO and 0.86 tonnes of palm kernel oil production will be lost, translating into a yearly opportunity loss of RM4.37 billion in profit and RM11.8 billion in revenue.

This lack of production of palm oil, meant that the global supply of palm oil dropped significantly because SDP is the biggest producer of palm oil in the world. The Palm Oil Supply and Demand Outlook 2021 also mentioned factors such as wet weather conditions, prolonged drought, and lower

and more expensive fertilizer applications had a factor to play in the reasoning behind the lower output of palm oil (Tan & Lim, n.d.). Not only that, Malaysia has seen a drastic drop in export demand for palm oil from global markets such as China and India (Jaafar, 2020). The war in Ukraine also triggered a global edible oil shortage which influenced the price of palm oil which laid on top of the results that COVID-19 created (“Malaysia expects crude palm oil”, 2022). All these factors resulted in a rally in palm oil prices. The prices for a ton of Malaysian palm oil on the day of Malaysia’s lockdown (16th of March 2020) were at RM2288 according to the history of palm oil futures. The price for a ton exploded because of the before mentioned factors and ended at a historical top at RM7104 on 25th of April 2022 (Trading Economics, n.d.). (See Appendix 1)

This fall in labor and increase in price was also shown in the financial results of SDP during and after COVID-19. SDP’s revenue in 2019 was RM12,062 million with an increase to a revenue of RM13,081 million in 2020. With the increasing prices of palm oil, their revenue rose to a significant amount of RM18,695 million in 2021. This was a year-on-year increase of 43%. This huge increase in revenue also doubled the net earnings and profit before tax and interest (Sime Darby Plantation, 2021). (See Appendix 2). SDP mentioned CPO price rally as a key factor for their financial result, and even though fresh fruit bunch production decreased for the year, SDP’s net profit increased dramatically in 2021 due to higher realized prices. The limited availability of palm oil and the unstable crop conditions of other edible oils have combined to keep palm prices at historically high levels.

In summary, SDP faced a heavy challenge from the global pandemic, which was the significant loss of labor. This affected the production of palm oil which had an impact on the palm oil industry and exports worldwide. Because of multiple factors, the price of palm oil increased throughout the pandemic, ending up giving the company a positive financial result based on the challenge.

III. SOLUTION

In order to tackle the issues mentioned above, SDP has carried out a few solutions to solve the issue during the time of COVID-19.

➤ *Enhanced Safety Protocols*

After the announcement of the first case of employee testing positive for COVID-19 in Sime Darby Oil refinery in Port Klang, the company took serious actions regarding safety protocol towards the company. Firstly, the immediate action taken by the company was to sanitize the common facilities at the refinery and the affected floors in the office building. Besides, other preventive measures such as declaration of attendance gathering involving 50 or more people, travel ban for business purposes, all forms of communications by digital platforms, limited physical access to operations, and requirement for visitors to fill up a self-declaration form were being taken (Sime Darby Plantation, 2020). By taking these steps, SDP helps to lower the risk of

increasing confirmed cases of COVID-19 that will significantly affect the daily operations of the company.

➤ *Shortage of Labor*

SDP is closely working with the Malaysian government to negotiate with other countries regarding the intake of migrant workers for the plantation industry. The former minister of Plantation Industries and Commodities, Zuraida Kamaruddin stated that Malaysia was discussing with several neighboring countries, including Indonesia, India, Bangladesh, and Thailand regarding the labor supply agreements to ensure plantations are being harvested and short-term production consistency (Chu, 2022). More importantly, SDP is trying to lower the reliance on foreign workers in their palm oil plantations. To do that, SDP is actively looking for locals, including parolees to resolve the labor shortage issue. SDP as a palm oil giant, has been collaborating with the prisons department to recruit parolees (Asila, 2020). Adi Wira Abdul Razak from SDP claimed that the payment scheme for parolees will be the same as other workers. As they can learn technical skills during this period, it helps parolees to secure a job in SDP in the future, which also benefits SDP in the long run to lower the reliance of foreign workers. Moreover, SDP is also trying to attract the locals into the industry by making the work less arduous. This can be done through automation and mechanization of the plantation process (“Malaysia Palm Oil Industry”, 2020). However, the core and crucial task such as harvesting the fruits from the tree still requires labor. It is worth mentioning that SDP’s plan is to eliminate foreign workers in its estates by employing 100% local workers by 2027. Under its “Project Local” plan, SDP hopes to attract more local workers into the plantation industry with automation revolving around it by increasing the minimum wage from RM1,500-RM2,000 to RM3,000 (“SDP Project Local”, 2023). This would lessen the risk of relying too much on foreign workers and improve the company’s fresh fruit bunch evacuation procedure, and guarantee that the social pillar under the ESG concerns is upheld.

➤ *Decrease in Demand from China & India*

The decrease in demand for palm oil from China has only a small impact towards SDP. The reason is palm oil exports to the Chinese market only hold a very small portion of the total output for SDP. To be specific, less than 100,000 tonnes of crude palm oil out of 2.5 million tonnes of the total production is being exported to China (Jaafar, 2020). In addition, India bans palm oil import from Malaysia has resulted in Indian traders to pay more, at a premium price for Indonesian crude palm oil. However, this might not necessarily negatively affect the sales for SDP. The reason is SDP operates in both countries. Therefore, if SDP could not export from Malaysia, they can still ship from Indonesia (Jaafar, 2020). Lastly, Indonesia’s existing customers will face lesser supply of the oil as more Indians buy from Indonesia. Therefore, Indonesia’s customers will seek alternative places, such as Malaysia.

IV. EVALUATION

The above solutions made by SDP can be effective in the short-run but not in the long-run. According to Ibrahim (2023), although hiring more local workers can be favorable to employers, they still prefer hiring foreign workers because they have better attitudes and are more likely to deliver higher-quality work, subsequently leading to the avoidance of high turnover rates and absenteeism. Additionally, Azman (2021) stated that due to government’s exemptions and discounts, the cost of hiring foreign workers is still considerably less than hiring locals. Not only that, but the palm oil plantation sector is also prone to the social stigma of 3D (Dirty, Difficult, and Dangerous). This has largely affected the attractiveness of hiring locals into the sector as they often steer clear of jobs in physical labor-intensive industries like agriculture since society does not value such occupations highly (Kumar, 2016). SDP also needs to consider the extra costs that will incur while investing in training and development programs for new local workers who did not have the necessary skills and experience in the palm oil sector.

SDP should move in a direction where the goal is to reduce reliance on manual labor while increasing the level of automation and mechanization in their operations. For

example, Sime Darby Plantation (2022) has pointed out the plan to reduce the number of plantation workers by 55% by the end 2023, and by the end of 2024, SDP will increase the land-to-man ratio to one worker for every 17.5 hectares, as opposed to one worker for every 8 hectares now. A collaboration between the Malaysian government with the palm oil industry to initiate the Mechanisation and Automation Research Consortium of Oil Palm (MARCOP) aims to increase the use of technology in the field to help lessen the need for labor in palm oil harvesting (Kadir, 2022). Automated machines, unlike human labor, can work continuously, in various weather conditions, and at a consistent pace, which can lead to higher yields and reduced labor-related downtime. This will reduce operating costs, raise palm oil production, and address the labor shortage issue which in turn will boost the revenue of palm oil producers in Malaysia. As a result, SDP can achieve increased production while saving time and being more effective. SDP who values sustainability can utilize automation to support sustainable agricultural practices by reducing resource wastage. For example, automated irrigation systems can optimize water use, and precision agriculture techniques can minimize the use of pesticides and fertilizers (Sime Darby Plantation, n.d.).

➤ *The Table below shows some of the Automation and Mechanization efforts done by SDP:*

Table 1 Automation and Mechanization efforts done by SDP

Automation/ Mechanisation initiatives at SDP	Functions	Benefits
Point-To-Point (P2P) Drone Sprayer	Equipped with high-tech cameras and Artificial Intelligence that delivers extended hectareage precision spraying of pesticide	Higher precision over larger land parcel at lower costs A coverage of 8 hectares per day as opposed to 3 hectares per day done manually <ul style="list-style-type: none"> ● Reduce manual labor by 70%
The Azman Sri Pulai (ASP) Herbicide Strip Sprayer	Used in mature oil palm areas and effective for terraces with fewer than 15 degrees	A coverage of 8-9 hectares a day as opposed to 3 hectares per day done manually <ul style="list-style-type: none"> ● Reduce manual labor by 3 workers ● Reduce costs by 63%
The Mechanised Fertiliser Machine (MFM)& Mechanised Terrace Fertilizer Applicator (MTFA)	Used for spreading fertilizers on terraced, undulating, or flat mature areas	A coverage of 8 hectares per day as opposed to 2 hectares per day done manually <ul style="list-style-type: none"> ● Reduce manual labor by 4 workers
The Nursery Drone Pest and Disease (P&D) Sprayer	Used for pest & disease operations	<ul style="list-style-type: none"> ● Reduce manual labor by 88% Increase productivity to 15,000 seedlings a day, as opposed to 1,800 seedlings a day done manually

• *Note:* Adapted from Sime Darby Plantation (2022)

The labor shortage issue caused by the Covid-19 pandemic has served as a wake-up call for the palm oil industry to realize the benefits of increased automation. For instance, FGV plantations, another major player in the industry, has implemented the palm oil mil integrated system (POMIS) to replace human labor in plant supervision, such as operational control and system monitoring. The initiative has proved effective during the pandemic as 5% of human labor was saved, human errors were greatly reduced, and has helped to minimize work-related accidents with equipped safety features (“66 out of 67”, 2021). To date, SDP has

invested more than RM150 million in R&D in support of automation. In the long run, SDP can achieve specialization where human labor can be freed up to concentrate on more complex and value-added activities by automating repetitive and regular tasks. This allocation of resources enhances the overall efficiency of the workforce, as employees can specialize in roles that require unique skills and knowledge. Ultimately, SDP can position itself as the industry leader in adopting advanced technology and automation, giving the company competitive advantage in the market, which can attract customers and stakeholders who value innovation and efficiency.

V. CONCLUSION

In conclusion, SDP encountered significant obstacles during the COVID-19 pandemic, primarily as a result of its heavy reliance on foreign labor in the palm oil industry, which was disrupted by border closures and movement restrictions. Initially, this labor shortage and the decline in global palm oil demand appeared to be significant setbacks. Nonetheless, SDP adopted a multifaceted strategy to address these obstacles.

SDP implemented enhanced safety protocols to protect its workforce and operational continuity, taking immediate measures to prevent the spread of COVID-19 within its facilities. SDP also negotiated with neighboring countries to secure labor agreements and actively sought to reduce its reliance on foreign workers by recruiting local talent, even collaborating with the prison department to employ parolees.

Despite the fact that these short-term measures have proven effective in maintaining production and stabilizing revenues, it is essential to consider their long-term viability. SDP's commitment to reducing manual labor and increasing automation and mechanization is the key to its future success. By investing in technology and research, the company intends to significantly reduce its reliance on human labor, resulting in cost savings, increased yields, and sustainability gains.

This pandemic-induced labor shortage serves as a catalyst for automation and innovation within the palm oil industry. By using new technology and automation, SDP can not only get past the problems it is facing right now, but it can also become a leader in its field, giving it an edge over its competitors and attracting people who care about efficiency and being good to the environment. This shift towards automation has the potential to improve the overall efficiency of the palm oil industry, reduce reliance on foreign labor, and ensure long-term sustainable growth.

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APPENDICES
APPENDIX 1

➤ *CPO Futures Prices*



Fig 1 CPO Futures Prices
Source: <https://tradingeconomics.com/commodity/palm-oil>

APPENDIX 2

➤ *SDP's Financial Highlights*

FINANCIAL HIGHLIGHTS

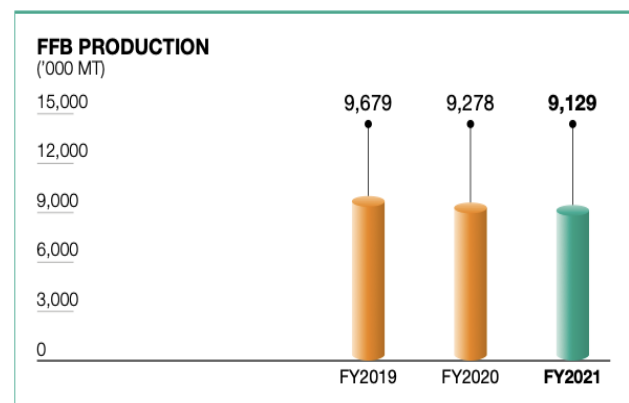
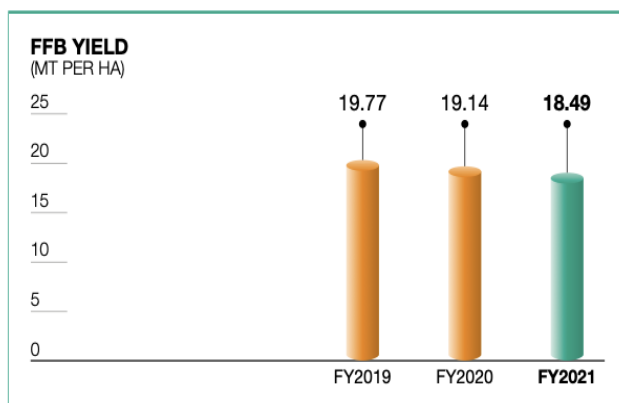
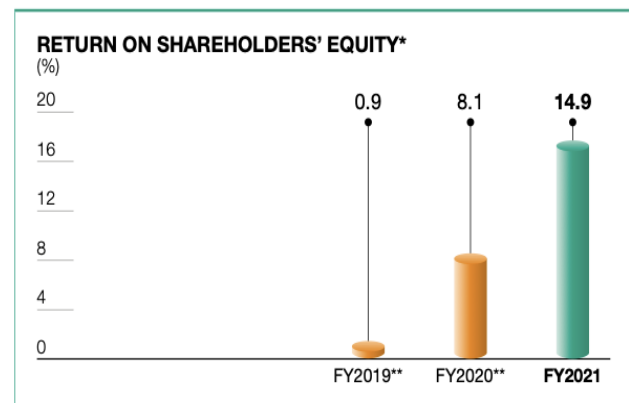
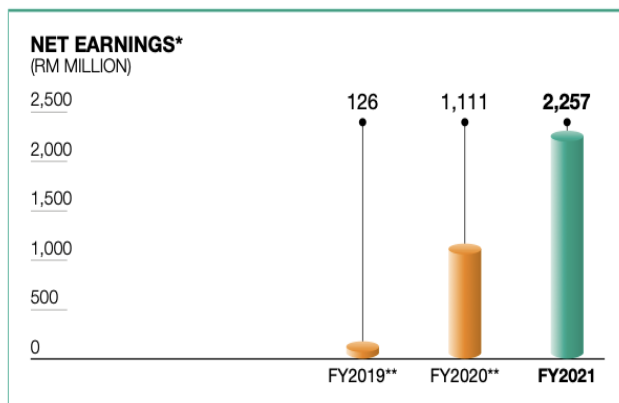
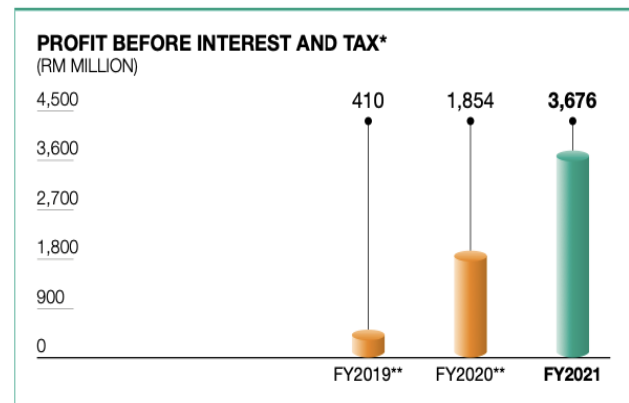
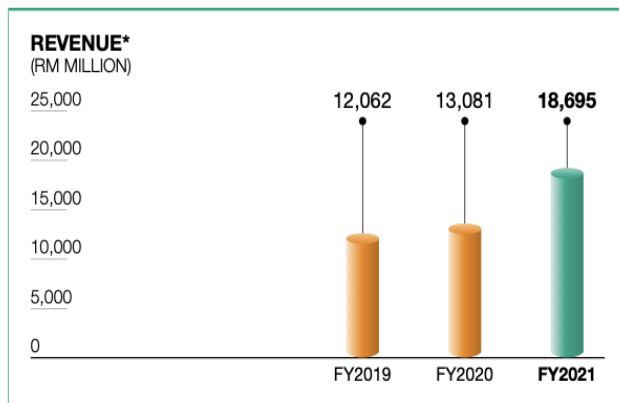


Fig 2 SDP's Financial Highlights

Source: <https://www.insage.com.my/Upload/Docs/SIMEPLT/Sime%20Darby%20Plantation%20Annual%20Report%202021.pdf>