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Maintenance Financing Analysis of Oil Palm Order Revenue at PT Laras Astra Kartika

Rena Agustina[1], Heriyanto[2]
[1,2]*Faculty of Economics & Business, Universita Bina Darma, Indonesia*
renaagustina2019@gmail.com

Abstract

The purpose of this study was to analyze factors that affect the income of PT Laras Astra Kartika's oil palm plantation business. First, the cost of oil palm production per hectare and maintenance costs on income is analyzed. Then, the data analysis method is used to determine the technical maintenance of oil palm production. It is explained using the formula for the total cost of oil palm production and a financial feasibility test described descriptively. The primary data collection method is data obtained directly from the data source and secondary data, namely data obtained from related agencies. The results showed a strong relationship between the costs of production, maintenance, and mature plantations which affected oil palm income. Furthermore, from the results of financial feasibility, if the value of the R/C Ratio is more significant than one, then the oil palm plantation business of PT Laras Astra Kartika is feasible to be developed financially.

Keywords
cost; maintenance cost; financial feasibility; income.

I. Introduction

Oil palm is one of the plantations with a very high economic value. Indonesia is currently the largest palm oil producer in the world, followed by Malaysia and Thailand. The palm oil business has multiplied as Indonesia's most significant export of oils and fats, with a plantation area of more than 10 million hectares and around 16 million workers. Oil palm has been cultivated and developed in several provinces in Indonesia, especially on the islands of Sumatra and Kalimantan. In Indonesia, many palm oil companies have subsidiaries, so they do not only focus on the center of the Company, making it easier for companies or employees to manage these economic activities. Marketing is a process of planning and execution, starting from the conception stage, pricing, promotion, to the distribution of goods, ideas and services, to make exchanges that satisfy the individual and his institutions (Dianto in Asmuni et al, 2020). According to Tjiptono in Marlizar (2020) marketing performance is a function that has the greatest contact with the external environment, even though the company only has limited control over the company's environment. In the world of marketing, consumers are assets that must be maintained and maintained their existence in order to remain consistent with the products we produce (Romdonny and Rosmadi, 2019).

Oil palm has the potential to be developed on an area of 51.4 million hectares and has been cultivated in 25 provinces from 34 provinces in Indonesia, especially on the islands of Sumatra and Kalimantan (Ministry of Agriculture, 2018). Furthermore, one agro-industrial Company that produces and exports oil palm plantations in the Palembang area is PT Laras Astra Kartika.

PT Laras Astra Kartika is a subsidiary of PT Rajawali Nusantara Indonesia (Persero) / RNI Group which was established in Jakarta by Notarial Deed of Ny. Rukmasanti Hardjastya, SH No. 9, dated October 3, 1988, has been approved by the Minister of Justice

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with decree NO. C2-2050.HT.01.01 Year 1989 dated February 25, 1989, and has been registered at the Jakarta District Court with No. 732/1989 dated April 12, 1989, and announced in the State Gazette No. 105 dated December 31, 1991, Supplement No. 5098. Which aims to gain profit (profit) where one of the goals of the Company must always try to generate income as
expected.

The Company's principal activities are currently engaged in oil palm plantations, with the main products being *Crude Palm Oil* (CPO), *Palm Kernel* (PK). The Company has 4 (four) nucleus estates and 1 (one) unit palm oil processing plant in its business activities. In addition, an operational business unit is spread across the area around South Sumatra.

Table 1. Plantation and Palm Oil Processing Mill Division Oil Palm

No	Operational Unit	Capacity / Land Area	Location		Commodity
			Regency	Province	
	Palm Oil Processing Mill				
1	PKS Gunung prosperous	10 tons/hour	Ogan Komering Ulu	South Sumatra	CPO and PK
	Plantation				
1	Gunung Makmur IntiI	484.47 ha	Ogan Komering Ulu	South Sumatra	Fresh Fruit Bunches (FFB)
2	Gunung Makmur Inti Gardens II	436.32 ha	Ogan Komering Ulu	South Sumatra	Fresh Fruit Bunches (FFB)
3	Muncak Kabau Inti Gardens III	523.89 ha	Ogan Komering Ulu	Sumatra South	Fresh Fruit Bunches (FFB)
4	Muncak Kabau Plasma Farm	648.7 ha	Ogan Komering Ulu	South Sumatra	Fresh Fruit Bunches (FFB)

Source: PT Laras Astra Kartika, November 2021

The table above shows that the capacity of the available palm oil processing mills is 10 tons/hour. Furthermore, it consists of 4 (four) parts of oil palm plantations, namely; The first is the plantation which operates on Mount Prosperous Core I with a land area of 484.47 ha. The two plantations operate in Mount Prosperous Inti II with a land area of 436.32 ha. The three plantations operate in Muncak Kabau Inti III with an area of 523.89 ha. Furthermore, the four plantations operating in the plasma of Muncak Kabau with a land area of 648.7 ha. On the plantation, maintenance must be carried out to make a profit, where one of the Company's goals must always be to generate income as expected.

In maintenance activities, it must cost money. Garden maintenance costs are costs incurred by the Company to maintain the garden so it can operate according to the plan. Garden maintenance is often disputed between the maintenance section and the financing section because the maintenance section is considered a waste of costs. However, it must remain operational so that the Company can generate revenue.

Oil palm maintenance costs are part of the products used during oil palm plantations. Maintenance costs are high; many farmers do not consider how much they spend on maintenance; oil palm farmers only calculate the production costs they get. As a result, maintenance costs significantly affect farmers' income; the costs of maintaining oil palm plants are high, and their income is low.

The area of land for oil palm plantations also affects the cost of oil palm plantations. The area of oil palm plantations, up to 2 hectares, can incur many maintenance costs and minimal income. However, many farmers ignore how much maintenance costs are incurred; farmers only calculate farmers' income.

According to (Financial Accounting Standards, 2010), income is income from company activities known by different names such as sales, service income (fees), interest, dividends, royalties, and rent. Revenue can be from the sale of goods or services, measured based on the amount charged to buyers or consumers for the goods or services provided to them. In addition, income includes the proceeds from the sale or exchange of assets other than the goods or services produced.

Table 2. Maintenance Financing of PT. Laras Astra Kartika 2019-2021

Year of	Maintenance Costs/Production	Revenue
2019	27,817,381,312	34,114,539,800
2020	22,750,247,754	29,460,630,860
2021	24,396,818,361	34,756,713,160

Source: Profit and Loss Report of PT Laras Astra Katika

Based on the table above, the authors are interested in doing research at PT. Laras Astra Kartika, to see in more detail the development of oil palm plantation maintenance costs that impact income, the author takes the title "Analysis of Maintenance Financing on Oil Palm Plantation Income at PT. Laras Astra Kartika."

Based on the formulation of the problem above, the purpose of this research is: To find the relationship and explain the causes of changes in social facts and measurable phenomena, so it can be concluded that the purpose of this study is to analyze the financing model for oil palm plantation rejuvenation on income at PT. Laras Astra Kartika

From the results of this study, the authors hope to help companies as input regarding the development of oil palm plantation rejuvenation costs to income to avoid losses due to errors in the Company.

II. Research Method

In efforts to achieve the Company's goals, costs become one of the essential elements that the Company must issue to achieve the goals and objectives of the Company.

However, there are various definitions or definitions of cost, each of which is different. Therefore, it is not uncommon for many differences in perception.

According to (Supriyono, 2011), the cost is the acquisition price that is sacrificed or used to earn income (revenue) and will be used as an income generator.

According to (Zaki, 2011), costs are cash flows or the use of assets or the incurrence of debt (or a combination of both) during a period originating from the delivery or manufacture of goods, the delivery of services, or the implementation of other activities which are the main activities of the business entity. Therefore, from the opinions of the experts above, it can be concluded that the cost is a sacrifice of economic resources, measured in one dollar, which will occur in the future for specific purposes and as an exchange rate for expenditures, sacrifices, and obtaining a benefit in the future.

III. Research Method

The type of data used in this research is quantitative data. According to Sugiono (2014: 7), quantitative is an analysis of data expressed in the form of numbers. The data taken is data sourced from PT. Laras Astra Kartika, in the form of all data on financing reports at PT Laras Astra Kartika for 2 periods.

The data analysis technique is a method or way to process data into information so that the characteristics of the data become easy to understand and also helpful in finding solutions to problems in a study.

Qualitative Analysis is phenomenology which means research with an inquiry strategy that emphasizes the search for meaning, understanding, concepts, characteristics, symptoms, symbols, and descriptions of a phenomenon, focused and multi-method, natural and holistic, prioritizing data quality, and presented in a narrative.

Quantitative Analysis analyzes number-based data that includes categorical and numerical data or data that can be measured systematically. The data analysis technique used in this research is descriptive quantitative. Quantitative description is an analysis of data by describing and analyzing data with the financial feasibility of oil palm at PT Laras Astra Kartika.

IV. Result and Discussion

4.1 Total Palm Oil Plant Inventory

Table 3. Inventory

Year	Inventory of Finished Goods	Inventory of Supplementary Materials	Weight (kg)	Total
2019	740,341,392	1,932,319,537	155,479	2,672,660,929
2020	1,026,414,884	1,971,351,193	204,580	2,997,766.077
2021	143,488,695	936,259,180	24,460	1,079,747,875

Sources of Financial Statements PT Laras Astra Kartika

From table 3 above, Oil palm planting inventory consists of finished goods inventory and supplies of complementary materials. Inventories of finished goods include Palm oil (CPO) and Palm kernel (PK). Meanwhile, Supplementary Materials Inventory consists of Fertilizers and chemicals, factory spare parts, and lubricating fuels. Beginning inventory of finished goods for oil palm plantations in 2019 amounted to Rp 2,672,660,929, which results were obtained from inventory plus supplies of complementary materials weighing 24,460 kg.

4.2 Total Annual Palm Oil Plant Revenues

Of finished goods plus supplies of complementary materials weighing 155,479 kg. In 2020, Rp 2,997,766,077 was obtained from finished goods inventory plus supplies of complementary materials weighing 204,580 kg. And in 2021, Rp 1,079,747,875 result is obtained from finished goods inventory

Annual plants consist of mature and immature plants. Mature plantations are oil palm plantations located on an area of 920.79 hectares in East Ogan Komering Ulu Regency, Pandan Jaya village, Kota Negara, Sri Mulyo, South Sumatra. Meanwhile, the immature plant has an area of 523.89 hectares in Muncak Kabau Village, East OKU Regency, South Sumatra.

Table 4. Total Annual Crop Revenue

Year	Total
2019	20,082,168,271
2020	26,097,087,356
2021	32,358,791,722

The above results were obtained from mature and immature plants or annual crops. In 2019-2021, the total annual plants produced were 16,885,5022,952, respectively. While the total immature plants in 2019 amounted to 13,820,046,233 in 2020 amounted to 20,623,950,090 in 2021 amounted to 27,674,639,228. The above amount is obtained from mature and immature plants, then accumulated yearly. In 2019 it was accumulated at 10,623,380,914, in 2020 it was accumulated at 11,412,365,686, in 2021 it was accumulated at 12,201,350,458.

4.2 Total Production Costs and Income of Oil Palm Plants

a. Total Production Costs

Total Production Costs are the result of the sum of production costs: Plant Costs, Processing Costs, Overhead Costs, and Depreciation Costs.

1. Plant costs include Fertilization, Harvesting, Transportation, Weeding and grazing, Staff salaries and allowances, Maintenance of drains and ditches, Pruning, and Sanitation.
2. Processing costs include Salaries and employee benefits, Electricity and water generation costs, maintenance costs, fuel and lubricants, janks and waste handling, small tools and equipment, analysis costs, chemicals and additives, other costs, And the cost of rehabilitation and packing.
3. Overhead costs consist of: Salaries and allowances for non-staff employees, security costs, Musika fees, donation fees, lighting and telephone costs, tax administration costs, mess fees, vehicle costs, meeting costs, THR fees, medical expenses, equipment, Travel costs, insurance costs, maintenance, buildings, bridges, and yards, education costs, bank administration costs, and consumption and sports costs.
4. Depreciation costs consist of: building depreciation costs, mature plant assets depreciation, equipment and gasoline depreciation, heavy equipment depreciation, vehicle depreciation, inventory depreciation, and TA depreciation.

Table 5. Total Production Costs

Year	Inventory Beginning	Production	Costs Processing	Costs Overhead	Costs Depreciation Costs	Ending Inventory	Purchases FFB	Total
2019	1,240,993,785	5,625,140,744	2,400,672,703	3,816,537.922	2,631.591,071	740,341,392	12,842,786 , 478	27,817.381,312
2020	740,341,392	3,406,814,263	2,349,643,616	3,993,308.365	2,553.538,410	1,026.414,884	10,733,016 22,750	. 247,754
2021	1,026,414,884	4,012,780,723	2,420,341,622	3,969,165.527	2,513.133,939	143,488,695	10,598,470 , 361	24,396.818,361

From the above amount obtained from:

Total Production Cost = (Initial Inventory + Production Cost + Processing Cost + Overhead Cost + Depreciation Cost + Purchase of FFB) –

Year End Inventory 2019 = 1,240,993,785 + 5,625,140,744 + 2,400,672,703 + 3,816,537,922

+ 2,631,591,071 + 12,842,786,478 - 740,341,392

= 27,817,381,312

Year 2020 = 740,341,692 + 3,406,814,263 + 2,349,643,616 + 3,993,308,365

+ 2,553,538,410 + 10,733,016.693 - 1,026,414,884

= 22,750,247,754

In 2021 = 1,026,414,884 + 4,012,780,723 + 2,420,341,622 + 3,969,165,527

+ 2,513,133,939 + 10,598,470,361 - 143,488,695

= 24,396,818,361

So, it can be concluded that the results of the total production costs incurred in 2019 were 27,817. However, 381,312 in 2020, the total production spent was less than in 2019, and in 2021 the total production costs incurred increased from 2020, but less was spent in 2019.

4.3 Financing for Maintenance of Oil Palm Plants

In this case, the maintenance costs in producing FFB production, which, in turn, will also generate income. The maintenance costs will be described in the following table:

Table 6. Oil Palm Plant Maintenance Financing

No. 1	2019 Maintenance Costs	137,751,911 2020	300,192,052 2021	293,547.075 2
Fertilization	1,278,868,553	139,292,170	568,712,381	3

Pest	and disease eradication	-	52,825,600	11,890,641
4	Maintenance of roads, waterways, and ditches	217,646,877	112,329,033	126,712,667
5	Fuel and lubricants	250,820,964	166,034,699	197,613,274
6	Small tools and tools	38,231,006	39,727. 564	28,384,737
7	Rehabilitation and packing	costs 844,0000	25,299,428	17,606,000
	Total	1,9393,163,278	835,700,546	1,244,466,7754

4.4 Total Income of Palm Oil Plants Per Year

Revenue is the result of sales of palm oil and palm kernel.

PT Laras Astra Kartika
Catatan atas laporan keuangan (lanjutan)
Untuk tahun yang berakhir 31 Desember 2020 dan 2019

(Dalam Rupiah)

24. Penjualan

	2020	2019
Minyak kelapa sawit - CPO	26.260.127.250	30.160.881.100
Inti kelapa sawit - PK	3.200.503.610	3.953.712.700
Jumlah	**29.460.630.860**	**34.114.593.800**

a. Rincian penjualan

	2020	2019
Volume penjualan:		
- Minyak kelapa sawit – CPO	3.311.320 kg	4.782.650 kg
- Inti kelapa sawit – PK	754.890 kg	1.123.270 kg
Jumlah	**4.066.210 kg**	**5.905.920 kg**

b. Rincian rekanan penjualan adalah:

	Persentase	2020 Jumlah	Persentase	2019 Jumlah
Minyak kelapa sawit – CPO				
- PT Aman Jaya Perdana	73,77%	21.734.161.500	88,41%	30.160.881.100
- PT Gunung Aji Jaya	15,36%	4.525.965.750	-	-
Inti kelapa sawit – PK				
- PT Aman Jaya Perdana	10,87%	3.200.503.610	11,59%	3.953.712.700
Jumlah	**100,00%**	**29.460.630.860**	**100,00%**	**34.114.593.800**

Figure 1. *Palm Oil Sales Report*

Income derived from the sale of palm oil to PT Aman Jaya Perdana, PT Gunung Aji Jaya, and CV Rafi Tanjung. Furthermore, palm kernel was sold to PT Aman Jaya Perdana and CV Artha. The income results for the 2019-2021 period can be seen in the table below:

Table 7. Oil Palm Plant Revenue

No.	Year	Income
1	2019	34,114,593,800
2	2020	29,460,630,860
3	2021	34,756,713,160

To see whether the oil palm plantation business is feasible, it can be measured using the R/C Ratio, which compares the total revenue and the total cost of production in the smallholder oil palm plantation business. The feasibility of oil palm plantations can be seen in the table below.

Table 8. Value of R/C Ratio of Oil Palm Plantation Business Per Year

Income	Total	Production Cost	Value of R/C Ratio
2019	34,114,539,800	27,817,381,312	1.22
2020	29,460,630,860	22,750,247,754	1.29
2021	34,756,713,160	24,396,818,361	1.42

From table 8 above can be seen the value of the R/C Ratio (feasibility) obtained from the income divided by the total cost. It can be concluded that in 2019-2021 oil palm plantations will be planted because if the R/C Ratio value is greater than 1, then the plantation is feasible to implement.

Which states that oil palm plantations are feasible to carry out can be accepted. This is because the total oil palm income is greater than the production and maintenance costs incurred, or the business is profitable.

V. Conclusion

From the Analysis conducted on the income of mature oil palm plantations (TM) in the research area, the following conclusions were obtained:

1. Maintenance activities for mature crops are fertilization, pest and disease eradication, maintenance of waterways and ditches, small tools and equipment, rehabilitation, and packing. As well as fuels and lubricants.
2. Maintenance costs for three specific periods, namely in 2019-2021, namely 1,939,163,278 in 2019, 835,700,546 in 2020, and 1,244,466,775 in the last year, namely 2021.
3. In mature plantations (TM), production costs influence coconut income palm because the income is higher than the cost of producing oil palm plantations.
4. The oil palm plantation business in the research area is financially feasible with an R/C value greater than 1. This is because the total palm oil revenue is greater than the total production costs and maintenance costs incurred, or the business is profitable.

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