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ANALYSIS OF PALM OIL FARMING INCOME IN KOGEM VILLAGE, MARBAU DISTRICT, NORTH LABUHANBATU REGENCY

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Abstract

This study aims to analyze the income of oil palm farming businesses in Kogem Village, Marbau District, Labuhanbatu Regency, consisting of production costs, revenue, income, and the revenue-to-cost ratio in oil palm farming. The sampling method used in this study was purposive sampling. This study collected data using primary and secondary data. Data analysis was conducted to calculate costs, revenue, income, and the R/C ratio. The results showed that the R/C ratio for oil palm farming was 3.48, meaning that every Rp. 100.00 additional costs incurred by the entrepreneur will generate Rp. 3.48.00 in revenue. This value is greater than 1, making palm oil farming economically profitable.

Keywords:Palm Oil, Income and Farming.

INTRODUCTION

Indonesia is an agrarian country with numerous agricultural sectors, one of which is the plantation sector. The plantation sector has always held a vital position, thus positioning it as a mainstay of national development, supported by its strong elements. Development continues to evolve in line with societal and scientific developments. Plantation development plays a crucial role in boosting national economic growth while simultaneously improving the standard of living of farmers. The changes brought about by development are planned and desired.(Darwis, 2015). According to Susila in(U. Utami et al., 2017)The palm oil-based industry plays a crucial role in economic growth, poverty reduction, and improving income distribution. Palm oil development has a positive impact on economic growth, as evidenced by growth in investment, output, and foreign exchange. The palm oil-based industry also significantly contributes to the welfare of farming households, primarily through the palm oil business.

Independent oil palm plantations can be identified by calling them smallholder plantations that are not affiliated with a company. This group differs from large private plantations or large national plantations. The latter are usually associated with State-Owned Enterprises (BUMN), while the former are with Privately Owned Enterprises (BUMS) or foreign companies. The difference between the three lies in the scale of the business. Independent plantations are generally owned by individuals with small plots of land, while private or national plantations are operated on a large scale.(Siahaan, 2017). Independent oil palm farmers are farmers who only have 0-25 percent of land and the commodity planted is oil palm. Independent oil palm farmers have the following characteristics: 1) Own land and can be proven through a certificate or other certificate that is recognized as a certificate of ownership; 2) They plant oil palm with their own labor; 3) They look for their own seeds; 4) They do their own garden maintenance and harvesting; 5) They sell their production freely to any factory; and 6) They look for and buy their own fertilizers and pesticides, although some of them get fertilizers from the government through groups.

According to Rofiq in(Utami & Halimatussadiah, 2023)Plasma farmers are farmers who rely on the company for land acquisition, planting, and production. Independent farmers are farmers who manage their plantations independently, including sourcing seeds, fertilizer, and selling their produce. Independent farmers are not directly tied to anyone, whether the company or the government, regarding the provision of seeds, fertilizer, or pesticides. The goal of farming is to maximize profits and choose the best use of production factors. Profits can be increased by minimizing costs while maintaining the level of revenue obtained and increasing total revenue while maintaining total fixed costs. Kogem Village is one of the villages in Marbau District. Kogem Village is one of the largest palm oil producing villages in Marbau District. Based on the above background, the author is interested in conducting research with the title "Analysis of Palm Oil Farming Income in Kogem Village, Marbau District, North Labuhanbatu Regency."

LITERATURE REVIEW

Oil Palm Plants

Oil palms are a commonly cultivated plantation crop in Indonesia. According to Jacquin (one of the world's leading botanists), oil palms originated from Africa, specifically the coast of Guinea, West Africa (Wahyuni & Hidayat, 2022). Oil palms are one of the most important crops in the Indonesian economy. The Indonesian Oil Palm Plantation

Fund Management Agency (BPDPKS) recorded Rp72.45 trillion in revenue from oil palms in 2021 in 2022, most of which came from exports of oil palms abroad (Kurniastuty, 2016). Oil Palm Growing Requirements Oil palms require optimal rainfall of 2,000 mm per year. Lack of sunlight can cause damage to the buds of the plant, thus reducing fruit production in oil palms. In addition to sunlight, oil palms also require sufficient sunlight. Lack of sunlight can disrupt flower formation in oil palms, resulting in low fruit production, so oil palms do not need shade plants (Sastrosayono, 2020). Income and costs of line farming are influenced by internal and external factors. Internal factors consist of farmer's age, education, knowledge, experience, skills, number of workers, land area, and capital. External factors include prices and the availability of production facilities (Seran, 2022). Soekartawi's Farming Business (Andrias Let Lal., 2018) defines farming as a place or part of the earth's surface where farming is carried out by a particular farmer, whether the farmer is an owner, a provider, or a salaried manager. In other words, agricultural enterprises are components of natural resources that are available in a particular place and are needed for agricultural production, such as land, water, and sunlight.

RESEARCH METHODS

Linear research was conducted in Kogem Village, Marbau District, North Labuhanbatu Regency, North Sumatra. The collected data included primary and secondary data. Primary data was obtained from direct field observations and direct interviews with oil palm farmers in Kogem Village. Secondary data was obtained from business documents, related research results, the Central Bureau of Statistics (BPS), and relevant literature. The collected data consisted of quantitative data.

Sampling Method

The sampling method was carried out intentionally (purposive sampling), namely samples that were carefully selected by determining individuals or research subjects with specific characteristics. The sample taken has specific characteristics of the population, making it fairly representative. This study involved 20 respondents, consisting of oil palm farmers with 10-year-old trees. This is because 10 years of age is the most productive period for oil palms. Furthermore, cultivation techniques were relatively uniform, resulting in a relatively homogeneous population.

Analysis Dora

According
to (Pudianingsi et al., 2022) For determine total reception in activity agriculture, can done calculation with use formul a**:**

$$TC = FC+VC$$

Information:
TC = Total Cost (Total Cost)
FC = Cost Still (Fixed Cost)
VC = Cost Variables (Variable Cost)

According
to Soekartawi in (Pudianingsi et al., 2022) For reception farming can counted with multiply amount results production with price sell from results production the. Equality This can stated with use formula:

$$TR = Q \times P$$

Information:
TR = Total reception
Q = Amount production Which produced
P = Price

According
to Soekartawi in (Pudianingsi et al., 2022) average income farmer Which is difference total reception farming plant co conut palmoil with all over cost Which used. Equality This can stated with use formul:

$$Pd = TR – TC$$

Information:
Pd = Income (Ha/Rp/Year)
TR = Total reception (Ha/Rp/Year)
TC = Total Cost (Ha/Rp/Year)

For test criteria income farming plant coconut palm oil in area study tall or low, that is:

1. If income farming coconut palm oil > UMK, so income farming coconut palm oil tall.
2. If income farming coconut palm oil < UMK, so income farming coconut palm oil low.

Feasibility of Oil Palm Farming

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Eligibility According
to (Pudianingsi et al., 2022) formula following used For compare total income And total cost:

$$R/C = TR/TC$$

Information:
TR (Total Revenue) = Total Reception (Rp)
TC (Total Cost) = Total Cost Production (Rp)
With criteria test as following:

1. If R/C < 1 so farming coconut palm oil No worthy developed.
2. If R/C = 1, so farming coconut palm oil worthy but No profitable.
3. If R/C > 1 so farming coconut palm oil worthy developed.

Descriptive Analysis of Palm Oil Farming Statistics

Descriptive statistical analysis is an analytical technique used to describe data characteristics numerically and graphically. Here are the steps for descriptive statistical analysis in SPSS:
1. Importing data: First, you need to import the data into SPSS. Data can be imported from various sources, such as Excel files, CSV files, or other databases.
2. Identify data types: Once the data is imported, you need to identify the types of data present, such as numeric, categorical, or date data.
3. Calculating descriptive statistics: SPSS provides a variety of descriptive statistics, such as:
- Mean (average)
- Median (middle value)
- Mode (the value that appears most frequently)
- Standard deviation (standard deviation).

RESULTS AND DISCUSSION

Production cost

The production costs incurred by farmers running a 10-year oil palm plantation in Kogem Village consist of fixed and variable costs. Fixed costs are the depreciation of equipment, while variable costs include the cost of production inputs such as fertilizer, pesticides, and labor. Production costs are the costs incurred by farmers in the production process.

Fixed Cost.

The fixed costs of palm oil in Togem Village are egrek, dodos, tojok, wheelbarrow, and sprayer. The price of each tool used varies: egrek is around Rp175,000.00 to Rp500,000 per unit, tojok is Rp70,000.00 to Rp170,000 per unit, dodos is Rp110,000.00 to Rp200,000, wheelbarrow ranges fromRp480,000 to Rp800,000**,,**sprayerstarting from around Rp170,000 for a manual model to over Rp2,000,000 for a powerful sprayer, depending on the type and brand.and cars amounting to Rp. 65,000,000.00–Rp. 350,000,000.00 per unit.

Variable Costs

Production Facility Costs

The cost of production inputs in oil palm farming includes the purchase of fertilizers and pesticides. The total cost of production inputs in one year at the research location was Rp48,325,000.00 ha. The fertilizers used by farmers were Phonska and urea. The cost of purchasing pesticides in one year was Rp34,250,000.00 ha. The pesticides used by oil palm farmers at the research location were Round-up and Garlon.

Labor costs

In oil palm farming, farmers use human labor. Work performed by laborers on oil palm plantations includes pest and disease control, fertilization, and harvesting. Labor costs are calculated based on the number of man-days (HOK). At the research site, the labor employed comes from both family and non-family workers. Oil palm farming in Togem Village is exclusively male. On average, workers spend five hours a day working. The total labor cost in oil palm farming in one year is Rp25,798,310 per hectare per year. The cost incurred by farmers to pay labor wages in the harvesting process is Rp120,000.00 per person-day. The average labor cost incurred by farmers is Rp17,246,389.00 per hectare/year.

Farmers apply fertilizer twice a year. The average cost incurred by oil palm farmers in this farming business is Rp2,584,000.00 per hectare/year. The cost incurred by farmers in paying wages to fertilizing laborers in one day is Rp120,000.00. Fertilization costs are the lowest costs incurred by farmers because fertilization is a process that requires less time compared to pest and disease control and harvesting, which are twice a year. Oil palm farmers require an average of Rp3,689,021. per hectare/year for pest and plant disease control. Pest and disease control is carried out two to three times a year. The cost incurred to pay labor is Rp120,000.00 per day/person. The total labor wages in one year average Rp25,321,400.00 per year. Respondents require 4–8 workers to run their oil palm farming business. Harvesting costs are the largest costs because harvesting in oil palm farming occurs approximately 16 times a year.

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Reception

Selling Price The selling price of palm oil FFB follows fluctuations in global oil prices. The current highest FFB price is IDR 3,400.00 per kg and the lowest price is IDR 2,900 per kg. The obstacle faced by farmers is the uncertainty of the existing FFB price due to the instability of global palm oil prices. The decline in oil prices affects farmers in Togem Village. Uncertain prices can affect the income received by farmers. Palm oil farmers in this study sell their products to collectors.

Palm Oil Production

Production is the result of oil palm farming. During a year, harvesting is carried out 15-16 times every three weeks. Average production by oil palm farmers ranges from 1-2 tons/ha. Production varies significantly among farmers. Differences in production are caused by the level of fertilizer use, pest control, and plant maintenance. While farmers provide sufficient fertilizer for their oil palms, it is sometimes difficult to obtain. Farmers must purchase fertilizer from outside the region. Land clearing in oil palm plantations is typically done four times a year. However, some farmers only clear weeds twice a year. These challenges prevent optimal oil palm production.

Total Revenue

The average income earned by oil palm farmers is Rp35,332,427.00 per year/ha. The production yield of oil palm farmers in Togem Village (1-2 tons ha) is below the average oil palm production yield which should be between 5-8 tons ha-1 (Directorate General of Plantations, 2017). The suboptimal production yield significantly affects the income earned by oil palm farmers. The price of fresh fruit bunches (FFB) at the company level continues to decline. One factor that influences suboptimal production which affects income is inadequate maintenance activities. Respondents in this study had received training on how to properly fertilize and care for plants through programs run by the local government and palm oil plantation companies in the area. However, sometimes farmers had to opt out of these programs due to labor constraints.For example, pest and disease control, which should be carried out four times a year, is only carried out once or twice a year. Palm oil companies will not accept fresh fruit bunches (FFB) that do not meet standards. Farmers prefer strict harvesting practices. Farmers must carefully select the fresh fruit bunches that are to be sold.

Income

Income And cost farming This influenced by factor internal And external. Factor internal consists of from age farmer, education, knowledge, experience, skills, amount power Work, wide land And capital. Factor exte rnal in the form of price And availability means production (Seran, 2022). The total income of oil palm farmers in one year of production is Rp72,000,000 per hectare/year. The income of farmers in Togem Village is lower than the average income of farmers in Labuhanbatu Regency. The results of several previous studies related to oil palm farming income are as follows. Amelia's (2014) research in Pelepah Ilir District, Bungo Regency, Jambi Province shows that the average income of oil palm farmers is Rp7,818,910.00-Rp10,321,172.00 and the R/C is 1.58–1.69. The results of Junaidi's (2016) research show that the average income of oil palm farmers in Panton Pange Village, Tripa Makmur District, Nagan Raya Regency is IDR 16,804,824.00 ha/year, while the average cost incurred is IDR 9,038,744.00 ha/year and the R/C is 2.86. According to Pratama et al. (2018), there is a difference in the income of oil palm farmers in the partner pattern (IDR 29,873,936.00 ha/year) and the independent pattern (IDR 22,456,318.00 ha/year).

Revenue Cost Ratio (R/C Ratio) The efficiency of a palm oil farming business can be determined by the R/C ratio, which is the comparison between total revenue and total costs. The R/C ratio indicates that every Rp1.00 increase in costs will result in revenue equal to the R/C ratio value obtained.

$$R/C = \text{TR/TC} = \frac{342{,}573{,}329}{98{,}325{,}000} = 3.48$$

The data processing results show that the R/C ratio for the oil palm farming business is 3.48, meaning that every additional Rp100.00 in costs incurred by the entrepreneur will generate Rp3.48.00 in revenue. This value is greater than 1, so that oil palm farming is economically profitable.

CONCLUSION AND SUGGESTIONS

Conclusion

Based on the results of data processing, the R/C ratio of the oil palm farming business is 3.48, meaning that every additional Rp100.00 in costs incurred by the entrepreneur will generate revenue of Rp3.48.00. This value is greater than 1, so that economically the oil palm farming business in Togem Village is profitable to run.

Suggestion

Suggestions that can be given in connection with the implementation of this research are as follows: Farmers need to be careful in selecting workers to work on their plantations so that workers can maximize their working time to manage oil palm plantations so that farming is efficient and efficient. And Farmers need to make financial bookkeeping to make it easier for farmers to manage their farming businesses and know the costs incurred and the income from oil palm production.

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