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ANALYSIS OF COSTS AND INCOME OF COCONUT FARMING IN PANTAI LABU DISTRICT, DELI SERDANG REGENCY

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Abstract

This study aims to analyze the production costs, revenues, and income of coconut farming in Pantai Labu District, Deli Serdang Regency. This study uses a survey method with a quantitative descriptive approach. The data used consists of primary data obtained through direct interviews with farmers using questionnaires, as well as secondary data from related agencies. Data analysis was carried out using cost, revenue, and farm income analysis. The results of the study indicate that the total production costs of coconut farming are Rp 6,131,275 per year. The average production of coconuts produced by farmers is 22,015 coconuts with a selling price of Rp 1,200 per coconut, resulting in revenue of Rp 26,417,700 per year. The net income earned by farmers is Rp 20,286,425 per year. Based on the results of the study, coconut farming in Pantai Labu District is classified as profitable and feasible to be developed because the revenue obtained is greater than the production costs incurred. Therefore, efforts are needed to increase the efficiency of cost use and support from the government in the form of extension and price stabilization to improve farmer welfare.

Keywords: coconut farming, production costs, revenue, income, Deli Serdang

INTRODUCTION

Indonesia is an agricultural country with significant potential for agricultural development, including the plantation subsector. This sector plays a crucial role in the national economy as a provider of industrial raw materials, a source of income, and a source of employment in rural areas. Furthermore, the plantation sector contributes to increasing Gross Domestic Product (GDP) and foreign exchange through the export of leading commodities (Mardikanto, 2007). Therefore, the development of plantation commodities is a priority in national economic development. One plantation commodity with high economic value and promising development prospects is the coconut plant. The coconut is a versatile crop, with almost every part of the plant being usable, from the fruit and husk to the shell and even the trunk. Coconut products can be processed into various derivatives, such as coconut oil, coconut milk, copra, and other industrial raw materials. This makes coconut a strategic commodity for supporting the local economy, particularly in coastal areas (Suhardiman, 2003).

Demand for coconut products tends to be stable and even increasing along with the development of the processing industry and increasing household needs. However, coconut productivity at the farmer level remains relatively low due to various factors, such as the use of rudimentary technology, limited capital, and suboptimal farm management (Soekartawi, 2006). This situation has resulted in low incomes for coconut farmers. Deli Serdang Regency is one of the regions in North Sumatra Province with significant potential for coconut cultivation. This region boasts favorable geographic conditions, particularly in coastal areas such as Pantai Labu District. This district boasts extensive land suitable for coconut cultivation, and the majority of its residents rely on agriculture and plantations for their livelihood.

Despite its significant potential, coconut farming in Pantai Labu District still faces various challenges, such as price fluctuations, low productivity, and high production costs. Furthermore, limited access to technology and market information also hinders increased farming efficiency. This results in suboptimal and unstable incomes for farmers (Gani, 2014). In farming activities, production costs are a critical factor influencing farmers' income levels. Production costs consist of fixed and variable costs incurred during the production process. Meanwhile, farm income

is derived from the difference between total revenue and total production costs. Therefore, cost and income analysis is crucial for determining the profitability and feasibility of a farmer's business (Soekartawi, 2006). An analysis of the costs and revenues of coconut farming in Pantai Labu District is necessary to provide an overview of the level of business efficiency and the profits earned by farmers. This analysis is expected to determine whether the coconut farming activities undertaken by farmers are profitable and to provide a basis for decision-making regarding future business development. Based on this description, research on the analysis of costs and income of coconut farming in Pantai Labu District, Deli Serdang Regency, is essential. This study aims to analyze the production costs and income earned by coconut farmers, thereby providing useful information for farmers, the government, and related parties in efforts to improve farmer welfare.

RESEARCH METHODS

Location and Time of Research

This research was conducted in Pantai Labu District, Deli Serdang Regency, North Sumatra Province **.** The location was selected purposively, considering that the coastal area holds significant potential for coconut farming, and the majority of its residents earn their living as coconut farmers. The research implementation period was approximately two months, namely in the period of October 2024 , which included data collection, data processing, and preparation of the research report.

Data Types and Sources

This study used a survey method with a quantitative descriptive approach. The data used in this study consisted of primary and secondary data.

1. Primary data was obtained directly from coconut farmers through interviews using a questionnaire developed to meet the research objectives. The data collected included production costs, production volume, selling prices, and farmer characteristics.
2. Secondary data was obtained from relevant agencies such as the Central Statistics Agency (BPS), village offices, as well as relevant literature such as books, journals, and research reports that support this study.

Population and Sample

The population in this study was all coconut farmers in Pantai Labu District, Deli Serdang Regency.

Sampling is done using systematic sampling techniques , which involves taking samples based on a specific sequence from the population list. Each member of the population is assigned a sequential number, and samples are then taken at specific intervals until the desired number of respondents is reached. The sample size for this study was set at [for example: 30–35 farmers] , which is considered representative of the coconut farming conditions at the research site. Furthermore, the sample size was divided proportionally into each village based on the farmer population in each village.

Data collection technique

Data collection techniques in this study were carried out through:

1. Observation , namely direct observation of coconut farming activities at the research location.
2. Interviews , namely collecting data through direct questions and answers with respondents using questionnaires.
3. Documentation **,** namely collecting data from documents, reports, and other written sources that are relevant to the research.

Data Analysis Techniques

Data analysis in this study was conducted to determine the cost structure, revenue, and income of coconut farming businesses. The data obtained were presented in tabular form and analyzed descriptively.

1 Cost Analysis

Cost analysis is used to calculate the total production costs incurred by farmers in a single production period. Total costs are the sum of fixed costs and variable costs, using the formula:

$$TC = FC + VC$$

Information:

- TC = Total Cost
- FC = Fixed Cost

- VC = Variable Cost

2 Acceptance Analysis

Farm business income is calculated based on the amount of production multiplied by the selling price of the product, using the formula:

$$TR = P \times Q$$

Information:

- TR = Total Revenue
- P = Selling price
- Q = Quantity of production

3 Income Analysis

Farm income is calculated as the difference between total revenue and total production costs, using the formula:

$$I = TR - TC$$

Information:

- I = Income
- TR = Total Revenue
- TC = Total Cost

RESULTS AND DISCUSSION

Coconut Farming Cost Structure

Costs in coconut farming represent all expenses incurred by farmers during the farming process. These costs consist of fixed and variable costs. Fixed costs are those that remain relatively constant and are not affected by production volume, such as land taxes. Meanwhile, variable costs are those that fluctuate according to production activity, such as climbing labor and harvest transportation costs.

In coconut farming in Pantai Labu District, the cost structure includes taxes, climbing costs, and transportation. Family labor costs are not included as an expense because they don't involve cash outlay.

Table 1. Cost Structure of Coconut Farming in Pantai Labu District, Deli Serdang Regency

Cost Structure	**Average Cost (Rp)**
Tax	11,875
Climbing Fee	2,793,000
Transportation costs	3,326,400
Total cost	**6,131,275**

Source: Processed data, 2024

Table 1 shows that the total costs incurred by coconut farmers in Pantai Labu District are Rp 6,131,275 **.** The largest cost components are transportation and climbing costs, while taxes contribute relatively little. This indicates that harvesting and distribution are the primary factors in the cost structure of coconut farming. It should be noted that some activities such as harvesting and land clearing are carried out by family labor, so they are not included in the calculation of production costs because they do not incur direct expenses.

Coconut Farming Income

Farm income is the proceeds earned by farmers from the sale of coconut production. Income is calculated based on the quantity produced multiplied by the selling price per unit.

Table 2. Coconut Farming Income in Pantai Labu District, Deli Serdang Regency

No	**Average Production (fruit)**	**Price/piece (Rp)**	**Average Revenue (Rp)**
1	22,015	1,200	26,417,700

Source: Processed data, 2024

Based on Table 2, the average annual coconut production by farmers in Pantai Labu District is 22,015 coconuts . With a selling price of Rp 1,200 per coconut , the average annual revenue is Rp 26,417,700 . This revenue indicates that coconut farming produces substantial yields and has the potential to increase farmers' income.

Coconut Farming Income

Farm income is the difference between total revenue and total production costs incurred by farmers. This income reflects the profits earned by farmers from coconut farming activities.

Table 3. Coconut Farming Income in Pantai Labu District, Deli Serdang Regency

No	Description	Amount (Rp)
1	Reception	26,417,700
2	Total cost	6,131,275
	Income	**20,286,425**

Source: Processed data, 2024

Based on Table 3, the income earned by coconut farmers in Pantai Labu District is Rp 20,286,425 per year . This value is obtained from the difference between revenue of Rp 26,417,700 and total costs of Rp 6,131,275. These results indicate that coconut farming in Pantai Labu District provides significant profits for farmers. With relatively low production costs and substantial revenues, coconut farming is considered feasible for development as a primary source of income for the local community.

CONCLUSION

Based on the results of research on the analysis of costs and income of coconut farming in Pantai Labu District, Deli Serdang Regency, the following conclusions can be drawn:

1. The cost structure of coconut farming consists of taxes, climbing costs, and transportation costs. The total annual cost incurred by farmers is Rp 6,131,275, with transportation and climbing costs accounting for the largest cost components.
2. The average coconut production produced by farmers is 22,015 coconuts per year with a selling price of IDR 1,200 per coconut, resulting in an income of IDR 26,417,700 per year.
3. The net income earned by farmers is IDR 20,286,425 per year, which is the difference between total income and total production costs.
4. Based on these results, coconut farming in Pantai Labu District is considered profitable and worth developing, because the income obtained is greater than the costs incurred.

SUGGESTION

Based on the results of the research that has been conducted, the following suggestions can be given:

1. For Farmers: Farmers are expected to improve efficiency in production costs, particularly transportation and climbing labor, to optimize profits. Furthermore, farmers need to improve coconut plantation maintenance to increase harvest productivity.
2. For Regional Governments: Regional governments are expected to provide support through outreach, training, and assistance with production facilities to coconut farmers. Furthermore, policies are needed to help stabilize coconut prices in the market to increase farmer incomes.
3. For Further Researchers: Further research is recommended to further examine the factors that influence coconut farming production and income, such as land area, plant age, and use of technology, using more in-depth analysis methods.

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