



## INCOME ANALYSIS OF PEOPLE'S COFFEE FARMERS (COFFEA). IN SIPIONGOT VILLAGE, DOLOK DISTRICT, NORTH PADANG LAWAS DISTRICT

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### Abstract

North Padang Lawas Regency is one of the largest districts for coffee production centers in North Sumatra, one of which is in Sipiongot Village. Sipiongot Village is the village with the largest coffee production followed by the number of farmers. Sipiongot Village has a small number of farmers. Coffee in Sipiongot Village is relatively low compared to other sub-districts. This can mean that the land area in Sipiongot Village is large, so that to increase the productivity of plants, development can be carried out. In the research, it can also be concluded that coffee production which decreases with decreasing area results in decreasing farmer income. Another cause is the high cost structure of coffee cultivation and post-harvest, resulting in farmers' welfare levels decreasing. Therefore, a problem formulation can be formulated, namely: 1. What is the structure of production costs for coffee farmers in Sipiongot Village. 2. What is the income of coffee farmers in Sipiongot Village? This research uses quantitative methods then income analysis and data analysis. Quantitative analysis is carried out to see the condition of the location, the condition of the farmers. Analyze income channels, and the function of income (marketing). With the research results, the R/C ratio value for cash costs obtained by farmers in Sipiongot Village is IDR. 59,756,078 and the R/C ratio value for total costs is Rp. 68,980,131. This proves that the coffee farming business run by coffee farmers in Sipiongot Village is less profitable.

Keywords: Coffee, Income, Sipiongot Village.

### 1. Introduction

North Sumatra is one of the areas producing plantation crops, especially Arabica coffee, in Indonesia, where this commodity has an important role in the economy which is directed at increasing yields, production quality and increasing people's income, especially farmers. Data on the development of plant area and production of coffee plants in North Sumatra in the last four years can be seen in table 1 below:

In 2017 the area of coffee land in North Sumatra was around 69,340.92 ha and coffee production in North Sumatra was around 58,055.09 tons. In 2018 the area of coffee land in North Sumatra was around 77,765.00 ha and the amount of coffee production was around 66,831.00 tons, in 2019 the area of coffee land in North Sumatra was around 77,867.00 ha and the total production was around 66,832.00 tons. In 2020 there was an increase, namely the area of coffee land was 77,898.00 ha and the total production was around 67,469.00 tons.

Based on the data above, the increasing area of coffee plantations does not trigger an increase in the amount of coffee production seen from the amount of coffee productivity. In North Sumatra there are several districts that cultivate coffee. One of them is North Padang Lawas District. Some areas in North Padang Lawas Regency, both villages, are engaged in coffee farming, especially coffee plants. This is due to the environmental aspect (soil, climate, altitude and temperature) which supports the growth of coffee.

Coffee is a type of plantation crop that has been cultivated for a long time in Indonesia. There are four types of coffee, namely robusta coffee (*Coffea canephora*), coffee (*Coffea arabica*), liberica coffee (*Coffea liberica*), and excelsa coffee (*Coffea excelsa*). Rahardjo (2012) states that there are two types of coffee plants grown in



Indonesia, namely Robusta coffee and Arabica coffee, because Robusta and Arabica coffee are more economical and commercial, while Liberica coffee and Excelsa coffee are less economical and less commercial. Arabica coffee has a high quality taste and lower caffeine content compared to robusta, so the price of robusta coffee is more expensive and robusta coffee is more resistant to leaf rust disease caused by the *Hemileiavastatrix* fungus (Rahardjo, 2012).

North Padang Lawas Regency is one of the largest districts for coffee production centers in North Sumatra. This can be seen from the following table: From data on land area and production in 2017-2018 there was a quite large increase, namely 134 ha and 266 tons, in 2018-2019 there was a quite large increase, namely 102 ha and 125 tons, in 2019-2020 there was an increase of 56 ha and 98 tons, this is a reference for coffee farmers to increase their production results.

Based on Table 2, it can be seen that Dolok District is the District with the largest coffee production followed by the number of farmers. Dolok District has a small number of farmers. Coffee in Dolok District is relatively low compared to other districts. This can mean that the land area in Dolok District is large, so that to increase the productivity of plants, development can be carried out.

In the research, it can also be concluded that coffee production which decreases with decreasing area results in decreasing farmer income. Another cause is the high cost structure of coffee cultivation and post-harvest, resulting in farmers' welfare levels decreasing. For this reason, it is necessary to analyze coffee income in Dolok sub-district, North Padang Lawas Regency.

## 2. Research Methods

This research uses quantitative methods then income analysis and data analysis. Quantitative analysis is carried out to see the condition of the location, the condition of the farmers. Analyze income channels, and the function of income (marketing).

To analyze the data in this research, quantitative descriptive analysis was used to answer the problem of how much coffee farmers in Dolok District, North Padang Lawas Regency earn and how profitable it is for farmers, an income formula was used. That farming income is the total income after deducting production costs (costs paid) which can be written as follows:

$$\pi = TR - TC \dots \dots \dots (3.1)$$

Where:  $\pi$  = Income

TR = Total Revenue

TR = R x Q

TR = Reception

P = Price (Rp/Kg)

Q = Quantity sold (Kg)

TC = Total Cost to find out the profit, it is used

TC = TVC + TFC

TC = total cost

TVC = variable costs

TFC = fixed costs

### 3. Research Result

#### Income Analysis

The amount received by Arabica coffee farmers in one year of production is IDR111,563,725/Ha. The income obtained by Arabica coffee farmers in one production is the difference between the income received and the total costs used for the Arabica coffee production process. Farmers gain profits in one year of production. The amount of profit obtained in one year of production is IDR42,583,595/farmer. Details of these costs can be seen in Table 14 below:

**Table 1.** Average income of arabica coffee farmers in one year production, north sumatra in dolok district

No	Description	Production/H a (Kg)	Selling price Rp/Kg	Mark (Rp/Ha)
1	Total Receipts	7009.803922	15,971	111,563,725
2	Total cost	7009.803922	15,971	42,583,595
	Income	7009.803922	15,971	42,583,595

Source: Primary Data 2021

Based on Table 14. Above, the average recipient 7009.803922Kg/Farmer, with selling price Rp.15,971/Kg and the income of Arabica coffee farmers in Dolok District, North Padang Lawas Regency in one production is IDR.42,583,595/Ha

Based on the explanation in the table above, it can be seen that the income of farmers in Sipiongot Village is quite low compared to the income of coffee farmers in general, which is caused by costs that are too high which are influenced by several factors such as: a) The shortage of fertilizers, the price of fertilizer is too high, is compounded by the very high costs of transporting fertilizer, b) Lack of knowledge in managing farming or lack of education means that collectors (toke) determine prices to farmers at will, c) Lack of maintenance and care for coffee plants, d) Lack of information and lack of government concern for farmers, e) The lack of development from the government, for example, includes road access to Silogo Logo Village and the government's lack of concern for the village, f) This is due to the land rental factor which has the nature of sharing the proceeds with the land owner.

It can be seen from the previous data that farmers in Silogo Logo Village are included in the poor category or do not correspond to coffee farmers in general who have high income and profits and production with land area if seen is not balanced which is caused by the lack of education of the farmers. farmers and the high prices of materials and equipment in the area so that farmers do not want to buy.

a. B/C Ratio analysis, B/C ratio analysis is an abbreviation of Benefit Cost Ratio. Otherwise known as a measure of the comparison between income and total production costs. B is Benefit, then C means Cost. The B/C ratio formula can be calculated using the formula  $B/C \text{ Ratio} = \text{Total Income (B)} : \text{Production Costs (TC)}$ .

B/C ratio analysis in research is used to find out whether the coffee farming business developed by farmers in Doloksanggul District, Humbang Hasundutan Regency is profitable. To find out the profits of a coffee farming business, it can be calculated using the following formula:

$B/C \text{ Ratio} = \text{Total Revenue (B)} : \text{Total Production Costs (TC)}$

$B/C \text{ Ratio} = \text{IDR } 1,218,971.26 : \text{IDR } 973,134$

B/C Ratio = IDR 1.25

### Sensitivity Analysis of Decreasing Production Amounts

The decline in production of 11.41 can be seen in table 15 below.

**Table 2.** Decline in the number of production scales over the last 5 years

Sample No	Change in Production Scale (Kg)					
	2016	2017	2018	2019	2020	2021
1	4,500	5,000	3,500	6,500	5,000	7,000
2	3,500	4,000	2,000	5,000	3,500	3,000
3	5,000	6,000	5,000	7,000	3,000	6,000
4	7,000	8,000	5,500	7,500	4,000	7,000
5	5,000	2,000	500	4,000	1,000	3,600
43	4,500	5,000	3,500	8,000	5,000	6,200
44	3,000	3,500	2,000	4,000	3,000	5,000
45	2,500	3,000	2,000	4,000	3,500	4,000
46	5,000	7,000	5,000	7,000	4,000	4,800
Average	4,947	5,702	3,783	6,696	3,867	5,439
Change		15.30	-33.65	77.00	-42.25	40.65
Average change				11.41		

The impact of the 11.41 percent reduction in production on rice farming can be seen in Table 2. Based on Table 15, it can be seen that the price of coffee in the last 5 years in elementary school was 29 farmers with a percentage of 63%, there were 16 junior high school farmers with a percentage of 35%, there were 0 high school farmers with a percentage of 0% and 1 D3 person with a percentage of 2%. The level of education influences farmers' knowledge and way of thinking and acting in managing rice farming so that farmers are expected to be able to make the right decisions in carrying out farming activities.

#### 4. Conclusion

The average value of total income for each respondent farmer in Sipiongot Village is IDR.111,563,725 with an average farmer income from cash costs of Rp.42,583,595 and income from farmers' total costs of Rp.42,583,595 and R/C Ratio for total costs of Rp.68,980.13. The average value of total income for each farmer in Sipiongot Village is IDR.111,563,725 with an average farmer income for cash costs of Rp.42,583,595 and income over total costs of Rp.68,980,131. The average total income of farmers in Sipiongot Village is IDR.111,563,725. The R/C ratio value for cash costs obtained by farmers in Sipiongot Village is IDR.59,756,078 and the R/C ratio value for total costs is IDR.68,980,131. This proves that the coffee farming business run by coffee farmers in Sibio Bio Village and Sipiongot Village is less profitable.

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