

Analysis of Costs and Revenue of Arabic Coffee Farming and its Sales System

(Case Study: Situmeang Habinsaran Village, Sipoholon District, North Tapanuli Regency, North Sumatra Province)

Kenal P. Hutapea¹, Nina Maksimiliana Ginting², Niasti Nur Adil Harefa³

^{1,2,3}Faculty of Agriculture, Universitas Methodist Indonesia, Medan, Indonesia

Corresponding author: hutapeaken@gmail.com

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Abstract

This research aims to determine the production costs and revenues of Arabica coffee farming in the research area to determine the net income and income of Arabica coffee farming families in the research area; to determine the feasibility level of Arabica coffee farming in the research area; to find out how the Arabica coffee sales system is in the research area. Determining the research area was carried out purposively. The sampling method is a simple random sampling method with a sample size of 30 farmers. The data analysis methods used are primary data and secondary data. The research results obtained several conclusions: The total cost of Arabica coffee farming in the research area for one year is IDR 24,747,244.44/Farmer or IDR 38,969,822.66/Ha. Revenue from coffee farming amounting to IDR 102,758,553.33/Farmer or IDR 160,581,337.78/Ha; The net income of Arabica coffee farming for one year is IDR 78,011,308.89/Farmer or Rp.118,834,031.78/Ha. The income of an Arabica coffee farming family for one year is IDR 98,325,542.22/Farmer or IDR 152,317,561.41/Ha; The RCR value for coffee farming in the research area is 4.27 or $RCR > 1$. This shows that coffee farming is still feasible to cultivate or develop in the research area. The Arabica coffee sales system in the research area is that Arabica coffee farmers sell their harvest to regional collectors, market it to district collectors, and then sell it to provincial collectors.

Keywords: Arabica Coffee Farming, Costs, Income, Feasibility, sales system

Introduction

Agriculture is a culture that humans first developed as a response to the challenges of survival, which gradually became difficult due to the increasing depletion of food sources in the wild due to the rate of human growth. (Ardiyanti et al., 2019; Buulolo et al., 2022). The agricultural sector is divided into food crop subsectors, horticulture subsectors, forestry subsectors, plantation subsectors, livestock subsectors, and fisheries subsectors (Tim et al., 2010).

One subsector that plays an important role in economic development in Indonesia is the plantation subsector (SUSILA & Dradjat, 2001; Wulandari & Kemala, 2017). This subsector provides more than 19.4 million jobs for the Indonesian population. If you look at export volume data for the last five years (2012-2016) recorded by the Ministry of Agriculture, five agricultural commodities are the most dominant and have the largest export volume: palm oil, rubber, coconut, coffee, and cocoa.

Coffee is an export commodity with a large role for developing countries as a foreign exchange earner and livelihood for their people. Indonesia is the best producer of Arabica coffee in the world and the second-best producer of Robusta coffee in the world after Vietnam (S. Lestari, 2021; Saputra, 2011). With abundant biological resources, supported by specific geographical conditions, optimal agroecosystems, and local wisdom possessed by its citizens, Indonesia produces specialty coffee products with a distinctive taste and aroma that are in demand worldwide (Adam et al., 2022; Tari et al., 2022). Indonesia's main coffee export destination countries include member countries of the European Economic Community (EEC), countries in the Americas, especially the United States, and Asian countries, such as Japan, Singapore, Korea, and Malaysia (Kurniawan, 2015; Pratama et al., 2022).

According to (Afriliana, 2018; Olivia, 2014), There are several benefits of coffee, namely: 1) reducing the risk of type 2 diabetes by up to 50%, 2) reducing the risk of liver cancer, breast cancer, and colon cancer, 3) preventing cell damage that can cause Alzheimer's and Parkinson's disease, 4) inhibiting the decline in cognitive function brain due to aging up to 30% in women. Coffee is one of the most popular drinks in the world, after mineral water. Every day, more than 1 billion cups of coffee are consumed by humans throughout the world. Unsurprisingly, coffee is the most traded commodity in the world after petroleum. The world's coffee needs have increased from 8 grams to 15 grams per cup. Apart from that, there has also been a cultural change in coffee drinking patterns from the conventional (drip coffee) system to the modern (espresso) pattern. Judging from people's lifestyles, coffee is the most popular drink besides tea. This can be seen from the proliferation of cafes serving processed coffee in big cities. Coffee drinks can be found in food stalls in luxury hotels. Adding a little creativity, coffee is served in various preparations, such as espresso, latte, cappuccino, instant coffee, brewed coffee, mocha coffee, and so on.

Arabica coffee is traditional coffee and is considered to have the best taste and a delicious aroma that, at first glance, resembles a mixture of flowers and fruit. This coffee originates from Brazil and Ethiopia and controls 70% of the world coffee market. The characteristics of Arabica coffee are that the coffee tastes milder or smoother, has a sour taste that Robusta coffee does not have, takes nine months for the flowers to process into fruit, and bears fruit in cold temperatures. While Robusta coffee tastes more like chocolate, the resulting smell is distinctive and sweet and has a rougher taste than Arabica. Robusta coffee is more susceptible to attack by insects, it takes 10-11 months for the flower to become fruit, and it bears fruit in warmer temperatures (Farhan, 2019; Panggabean, 2011; RADHITYA, 2023; Soesanto, 2020; Suci et al., 2024; Widyasari et al., 2023).

North Sumatra Province is an Arabica coffee-producing region in Indonesia cultivated by smallholder plantations.

Table 1 Plant Area, Production, and Average Production of Arabica Coffee Plants by District in North Tapanuli Regency in North Tapanuli Regency in 2016

No	Subdistrict <i>District</i>	Plant Area <i>Planting Area</i> (Ha)	Area of Yielding Plants Productive Areas (Ha)	Production <i>Production</i> (Tons)	Productivity <i>Productive</i> (Kg/Ha)
1	Parmonangan	1,699.75	1,315.25	1,272.13	967.22
2	Adiakonting	352.20	235.00	218.47	929.66
3	Sipoholon	627.57	485.50	510.25	1,050.98
4	Tarutung	604.40	450.50	460.30	1,021.75
5	Siatas Barita	530.25	390.25	399.29	1,023.16
6	Pahae Julu	210.50	165.00	165.57	1,003.45

7	Pahae Jae	141.00	120.50	96.26	798.84
8	Purbatua	87.50	23.00	19.80	860.87
9	Simangumban	84.25	59.00	47.05	797.46
10	Pangaribuan	2,430.85	1,661.00	1,785.48	1,074.94
11	Garoga	899.25	690.00	890.09	1,289.99
12	Sipahutar	1,478.91	1,025.50	1,469.59	1,433.05
13	Wholesale	2,712.20	1,270.25	1,836.28	1,049.15
14	Fence	1,666.50	1,270.25	1,280.38	1,007.97
15	Estuary	654.58	490.50	481.11	980.86
North Tapanuli		14,179.71	10,131.50	10,932.06	1,079.02

Source: BPS North Tapanuli Regency, 2017

Based on Table 1, the sub-district with the highest number of plantings is Siborong-borong, with a total production of 1,836.28 tons. However, if you look at the level of productivity, the Sipoholon sub-district is one of the sub-districts with the highest average production, 1,050.98 tons. This shows that the plant area is low, but it will produce a high average if it is productive. The following is the area of plantations producing Arabica coffee according to villages in Sipoholon District in 2017. Sipoholon District consists of several villages/sub-districts, namely Parmonangan, Adiakonting, Sipoholon, Tarutung, Siatas Barita, Pahae Julu, Pahae Jae, Purbatua, Simangumban, Pangaribuan, Garoga, Sipahutar, Siborong-borong, Pagaran, and Muara. The highest coffee plantation area, according to the village in Sipoholon District, is Lobusingkam Village, with a land area of 25 Ha. In second place is Situmeng Habinsaran Subdistrict, which ranks second with the largest coffee plantation area, namely with a coffee plantation area of 23 Ha. However, Arabica coffee in Situmeang Habinsaran Village has high demand and selling value compared to Arabica coffee from Lobungsikam Village. Situmeang Habinsaran Village, one of the sub-districts in Sipoholon District, has a population of 100 families living as Arabica coffee farmers (District et al., 2018).

Farmers' decisions to plant coffee in Situmeang Habinsaran village are based, among other things, on natural conditions suitable for coffee cultivation, the nature of the business, which is driven by market presence, marketing institutions, and relatively easy cultivation techniques and maintenance systems. The expansion of coffee plantation areas to increase production is still wide open, and utilizing this area is still very large unused land.

Arabica coffee, often called Sigararutang coffee, has a history with the people of the Situmeang Habinsaran area. People in the area borrow money from intermediaries to meet their needs, so the Sigararutang coffee harvest is used as collateral to pay debts to the intermediaries because Sigararutang coffee provides large amounts of harvest. High and with a high purchase price.

The price of Arabica coffee in the research area is Rp. 24,500/Kg. Judging from the average level of education of Arabica coffee farmers in the research area, namely junior high school, these farmers can generate a fairly high average net income, namely Rp. 8,193,795.18/Month. By making a living as coffee farmers, these farmers can meet the educational needs of their children, pay their way through college, and even produce many graduates.

Literature Review

The history of coffee began in Ethiopia (Africa) around the 3rd century and spread to other African countries, such as Yemen and Egypt. In Indonesia, coffee plants have been known since 1696, when the Dutch East Indies government imported them. The first type of coffee planted in Indonesia was Arabica coffee. Arabica coffee grows very well in areas with temperatures between 17-21°C. Rainfall affects the formation of flowers and fruit. For Arabica coffee, the rainfall that

can be tolerated is between 1,000-1,500 mm/year with ± 3 dry months and an altitude of 1,000-2,100 meters above sea level (asl). The higher the location of the Arabica coffee plantation, the better the taste of the coffee beans produced. Arabica coffee plants' roots are deeper than those of Robusta coffee. The requirements for good soil are to have a thick topsoil layer, fairly deep soil with an effective depth of > 100 centimeters; fertile, loose soil containing at least 3% organic matter and sufficient potassium (K) nutrients available; adequate air and water systems; and has a soil acidity degree (pH) between 5-7 (Rukmana, 2014).

Based on previous research (Rahmaniah, 2017), with the research title "Analysis of Coffee Farming in Pirian Tapiko Village, Tutar District, Kab. Polewali Mandar". Coffee development in Polewali Mandar Regency is growing from year to year, marked by developments in land area and production as well as types of coffee being developed. This increase in production can be achieved by increasing plant productivity per hectare using extensification and intensification through rehabilitation, rejuvenation, and better production factors. One of the coffee development areas in Polewali Mandar Regency is Pirian Tapiko Village, Tutar District. The population in this research is 283 coffee farmers in Pirian Tapiko Village. Sampling was carried out using a simple random method. (*Simple random sampling*) each farmer has the same opportunity to be selected, and 30 farmers are selected as samples from several populations. To analyze the income analysis formula, the income of coffee farmers in Pirian Tapiko Village is IDR 11,322,042.50, where the R/C is 1.72; this shows that the coffee farming business is worthy of development and has promising prospects.

Based on previous research (O. Lestari, 2016), with the research title "Analysis of Farming Business and Coffee Marketing Efficiency in Pulau Panggung District, Tanggamus, regency,." This research aims to understand coffee farming, the process of forming coffee prices at the farmer level, and coffee marketing channels, as well as analyze the efficiency of coffee marketing in Pulau Panggung District, Tanggamus Regency. This research was conducted in Gunung Megang Village and Sri Mengantin Village, involving 66 coffee farmers, following the marketing flow, namely collecting traders and wholesalers. The data analysis methods used in this research are qualitative descriptive analysis and quantitative descriptive analysis using farming analysis by calculating the R/C ratio and S-C-P model analysis (*Structure, Conduct, and Performance*) to analyze the organization of a market. The research results show that the R/C ratio > 1 means that coffee farming is feasible and profitable; farmers do not implement the system *hedging* for the product. The marketing channels for coffee in Pulau Panggung District, Tanggamus Regency are Farmers – collectors – wholesalers – and exporters. Coffee marketing in Pulau Panggung District, Tanggamus Regency, is not yet efficient; even though the share of producers reaches more than 80%, the Profit Margin Ratio (RPM) at each marketing institution is not spread evenly.

Research Method

This research was conducted in Situmeang Habinsaran Village, Sipoholon District, North Tapanuli Regency, North Sumatra Province, on the grounds that this area produces Arabica coffee. The population in this research is Arabica coffee farmers. The population of coffee farmers in the research area is 100 farmers. So, the sample from this research was 30 Arabica coffee farmers using the Simple Random Sampling method. The data collected in this research consists of primary data and secondary data. Primary data was obtained from observations, discussions with coffee farmers, and direct interviews with farmers using questionnaires prepared in advance. Secondary data was obtained from related agencies or institutions such as the North Sumatra Central Statistics Agency, North Tapanuli Regency Central Statistics Agency, Sipoholon District Agricultural Extension Officer, and Situmeang Habinsaran Subdistrict Head Office. Farming production cost analysis is a way to determine the production costs per unit of output of a type of goods produced in one planting season or one calendar year. Farming production costs are the

sum of all costs resulting from the production factors involved in the production process.

Results and Discussion

1. Analysis of Production Costs and Revenue from Arabica Coffee Farming in Situmeang Habinsaran Village

Production Costs of Arabica Coffee Farming in Situmeang Habinsaran Village

Farming production costs are the total costs incurred during the farming production process. Production costs in coffee farming can be classified into two parts: cash production costs and non-cash production costs. Cash costs are cash costs incurred by farmers, including wages for workers outside the family, purchasing fertilizer, purchasing medicines, and equipment depreciation. Meanwhile, non-cash costs are costs incurred by farmers only in the form of assessments or estimates of involvement in farming activities, including family labor and organic fertilizer.

a. Outpouring of Labor for Coffee Farming

PowerWork is an important production factor in farming management. The following is the average labor outpouring for coffee farming in Situmeang Habinsaran Village.

Table 2. Average Deployment of Labor in Arabica Coffee Farming in Situmeang Habinsaran Village

No	Type of work	Outpouring of Labor					
		Per Farmer			Per Hectare		
		TKDK	TKLK	TTK	TKDK	TKLK	TTK
1	Weeding	5.73	-	5.73	8.87	-	8.87
2	Spraying	2.43	-	2.43	3.14	-	3.14
3	Fertilization	3.91	-	3.91	6.12	-	6.29
4	Harvest	232.03	14.72	246.74	362.72	26.88	389.59
5	Processing	21.57	-	21.57	32.94	-	32.94
6	Drying	22.79	-	22.79	34.88	-	36.18
Amount		288.45	14.72	303.17	448.67	26.88	475.55

Source: Outpouring of Labor for Arabica Coffee Farming in Situmeang Habinsaran Village

Labor involvement in farming production is called the outpouring of labor in men's working days (HKP). In this research, the outpouring of labor comes from two sources: family labor (TKDK), labor in farming families, and workers outside the family (TKLK), which are wage workers. The amount of labor devoted to managing a farm depends on the type or stage of work in the farm production process. In the production process of coffee farming in the research area, the largest expenditure of labor is for the type of harvesting work, which is equal to 246.74HKP/Farmer or 389.59HKP/Ha. The smallest outpouring of labor is spraying activities, equal to 2.43HKP/Farmer or 3.14HKP/Ha.

Costs of Labor Depletion

The average costs of pouring labor into coffee farming in one year are shown in the following table.

Table 3. Average Cost of Devoting Labor to Coffee Farming in Situmeang Habinsaran Village

No	Type of work	Kindergarten Outlay Fee (Rp)		Percentage %
		Per Farmer	Per Hectare	
1	Weeding	401,333.33	621,148.15	1.80

2	Spraying	170,333.33	219,777.78	0.65
3	Fertilization	273,466.67	428,600.00	1.18
4	Harvest	17,272,266.67	27,271,733.33	82.43
5	Coffee Bean Processing	1,509,666.67	2,305,648.15	6.77
6	Drying	1,595,066.67	2,441,548.15	7.17
Amount		21,222,133.33	33,288,455.56	100

Source: Wages for Arabica Coffee Farming Workers in Situmeang Village

According to the table above, in the coffee farming production process in the research area, there are several types of work, including weeding, spraying, fertilizing, harvesting, processing coffee beans, and drying. The labor cost for coffee farming in the research area is Rp.21,222,133.33/Farmer or Rp.33,288,455.56/Ha. The largest outpouring costs are for harvest work, namely IDR 17,272,033.33/Farmer or IDR 27,271,733.33/Ha, with a percentage of 82.43%. This type of harvest work is carried out by workers within and outside the family who are paid IDR 70,000/HKP. The smallest labor is for spraying work using a spray pump filled with water and medicine, namely IDR 170,333.33/farmer or IDR.219,777.78/Ha.

b. Cost of Production Facilities

Each activity requires various kinds of production facilities to support the coffee farming process. Production facility costs include fertilizer and medicines. The following is the average cost of production facilities for coffee farming in one year of production.

Table 4. Types and Average Costs of Coffee Farming Production Facilities in Situmeang Habinsaran Subdistrict

No	Types of Production Facilities	Cost of Production Facilities (Rp)		Percentage %
		PerFarmer	Per Hectare	
1	Fertilizer	2,638,833.33	4,257,277.78	90.37
	a. Phonsca	555,000.00	829,246.03	
	b. NPK	946,666.67	1,540,211.64	
	c. ZA	343,333.33	566,957.67	
	d. SP-36	518,000.00	885,074.07	
	e. Salt	120,000	240,714.29	
	f. Pen	122,500.00	195,074.07	
2	Drugs	289,500.00	453,809.52	9.63
	a. Gromoxom	71,000.00	119,234.13	
	b. Basmilang	122,500.00	186,361.11	
	c. Roundup	96,000.00	148,214.29	
Amount		2,928,333.33	4,711,087.30	100

Source: Arabica Coffee Farming Production Facilities in Situmeang Habinsaran Village

Table 4 shows that the average cost of production facilities for coffee farming in one year is Rp.2,928,333.33/Farmer or Rp. 4,711,087.30/Ha. The production facilities coffee farmers use in the research area are fertilizer and medicine. The fertilizer production facilities are Phonsca, NPK, ZA, SP-36, Salt, and Manure, while the medicine production facilities are Gromoxom, Basmilang, and Roundup. The largest cost for providing fertilizer production facilities is 90.37% of the total cost of production facilities, namely Rp. 2,638,833.33/Farmer or Rp. 4,257,277.78/Ha. This situation is caused by coffee farming in the research area requiring plant care in the form of sufficient fertilization so that coffee plant growth can be achieved well. Meanwhile, the cost of medicines is IDR 289,500.00/Farmer and IDR.453,809.52/Ha, with a percentage of 9.63%. The lower use of medicines is because farmers in the study area also clear the land manually, namely

using hoes or machetes.

c. Equipment Depreciation Costs

The coffee farming production process involves various types of equipment. The types and average costs of equipment depreciation are listed in the following table.

Table 5 Types and Average Depreciation Costs for Coffee Farming Equipment Situmeang Habinsaran Village

No	Types of Production Facilities	Equipment depreciation costs (Rp)		Percentage %
		PerFarmer	Per Hectare	
1	Spray Pump	50,000.00	82,632.28	8.52
2	Pulper	85,000.00	140,474.87	14.48
3	Hoe	33,066.67	55,017.99	5.67
4	Tripe Machine	208,000.00	332,634.92	34.28
5	Mat	110,000.00	181,005.29	18.65
6	Bag	11,266.67	18,203.17	1.88
7	Bucket	22,444.44	34,978.84	3.61
8	Machete	12,000.00	19,600.53	2.12
9	Sorong (Beko)	48,333.33	79,298.94	8.17
10	Wooden Stairs	16,666.67	26,432.98	2.72
Amount		596,777.78	970,279.81	100.00

Source: Depreciation of Arabica Coffee Farming Equipment in Situmeang Habinsaran Village

Based on the table above, it can be seen that the types of production facilities used by coffee farmers in running coffee farming are spray pumps, pulpers, hoes, tripe machines, mats, sacks, buckets, machetes, shovels, and wooden ladders. Equipment depreciation costs are obtained from the costs incurred by farmers to purchase equipment divided by the equipment's economic life. Depreciation of coffee farming equipment in one year is Rp.596,777.78/Farmer or Rp. 970,279.81/Ha. The highest depreciation costs are for the tripe machine type, namely IDR 208,000.00/Farmer or IDR 332,634.92/Ha, with a percentage of 34.28% of the total depreciation costs.

Meanwhile, sacks have the smallest equipment depreciation costs, accounting for 1.88% of the total depreciation costs, Rp. 11,266.67/Farmer or Rp. 18,203.17/Ha.

d. Total Production Costs

The total cost of farming production is the sum of the costs of production facilities, labor, and depreciation costs for equipment involved in the coffee farming production process for one year.

Table 6. Total Production Costs of Coffee Farming in Situmeang Habinsaran Village as of 2017

No	Fee Type	Cost (Rp)/Month		Percentage %
		PerFarmer	Per Hectare	
1	Labor	1,768,511.11	2,774,037.96	85.42
	a. TKDK	1,682,644.44	2,617,237.96	
	b. TKLK	85,866.67	156,800.00	
2	Fertilizer	219,902.78	354,773.15	10.92
3	Drugs	24,125.00	37,817.46	1.16
4	Equipment Depreciation	49,731.48	80,856.65	2.49
Amount		2,062,270.37	3,247,485.22	100.00

Source: Total Production Costs of Arabica Coffee Farming in Situmeang Habinsaran Village

Based on the table above, the types of costs incurred for the farming process are labor, fertilizer, medicine, and equipment depreciation. The total cost of coffee farming per month is IDR.2,062,270.37/Farmer or Rp. 3,247,485.22/Ha. The highest cost is in the type of labor costs, namely 85.42%, where labor costs for one month are IDR 1,768,511.11/Farmer or IDR 2,774,037.96/Ha. Labor is an important production factor in farming management, which comes from labor from within the family and wages labor from outside the family. Then followed by fertilizer costs per month with a percentage of 10.92% of total production costs, where IDR 219,902.78/Farmer or IDR 354,773.15/Ha, equipment depreciation costs per month are 2.49% of total production costs, where IDR 49,731.48/Farmer or IDR 80,856.65/Ha, and the smallest production cost is the cost of medicines per month, namely 1.16% with IDR 24,125.00/Farmer or IDR 37,817.46/Ha.

2. Revenue from Arabica Coffee Farming in Situmeang Habinsaran Subdistrict as of 2017

Average coffee farming revenues for one year in the research area are shown in the following table.

Table 7. Average Revenue from Coffee Farming in Situmeang Habinsaran/Month Village

No	Description	PP (Rp)/Month	PH (Rp)/Month
1	Production (Kg)	349.52	536.75
2	Price (Rp/Kg)	2,041.67	2,041.67
3	Reception	8,563,212.78	13,150,321.20
4	Total Production Costs	2,062,270.37	3,247,485.22
5	Family Potential	1,692,852.78	2,790,294.14

Source: *Income and Efficiency Level of Arabica Coffee Farming in Situmeang Habinsaran Village*

The table above shows that monthly coffee production is 349.52 Kg/Farmer or 536.75/hectares, with a selling price of IDR 24,500/Kg. Revenue is the multiplication of production and price; hence, the monthly revenue of coffee farming in the research area is Rp.8,563,212.78Kg/Farmer or Rp.13,150,321.20Kg/Ha. The total production costs of Arabica coffee farming in the research area for one month are IDR 2,062,270.37/Farmer or IDR 3,247,485.22/hectare, which includes labor costs, production facilities costs, and equipment depreciation costs. The potential value of a family is the intangible costs incurred, such as TKDK and manure for one month, namely IDR 1,692,852.78/farmer or IDR 2,790,294.14/hectare. So, hypothesis 1 states, "There are quite high costs of Arabica coffee farming and farming revenues," which can be accepted.

3. Net Income and Family Income from Coffee Farming Arabica in Situmeang Habinsaran Village as of 2017

The following is the average income of Arabica coffee farming in the research area.

Table 8. Average Income from Coffee Farming in Situmeang Habinsaran Subdistrict Per Month

No	Description	PP (Rp)/Month	PH (Rp)/Month
1	Reception	8,563,212.78	13,150,321.20
2	Total Production Costs	2,062,270.37	3,247,485.22
3	Net income	6,500,942.41	9,902,835.98
4	Family Potential	1,692,852.78	2,790,294.14
5	Family Income	8,193,795.19	12,693,130.12

Source: *Income and Efficiency Level of Arabica Coffee Farming in Situmeang Habinsaran Village*

The table above shows that monthly revenue from Arabica coffee farming in the research area obtained by multiplying the production amount by the selling price is IDR 8,563,212.78/Farmer or Rp.13,150,321.20/Ha. Production costs are incurred during one month for the coffee farming process, namely IDR 2,062,270.37/Farmer or IDR 3,247,485.22/Ha. Net income from coffee farming is a measure that is often used to assess the success or failure of farming management. The net income of coffee farming is the production value minus the total production costs. However, the farming family's income is the value of labor, and manure is not considered a production cost. The net income of coffee farming for one month is Rp.6,500,942.41/Farmer or Rp. 9,902,835.98/Ha. Minimum Wage for North Tapanuli Regency in 2017, namely Rp. 2,169,233.31. This shows that the monthly net income of coffee farmers is 6,500,942.41/Farmer, which is greater than the minimum wage for North Tapanuli City. So, hypothesis 2 states, "The net income and family income of Arabica coffee farming in Situmeang Habinsaran Village is relatively high," which can be accepted.

4. Feasibility of Arabica Coffee Farming in Situmeang Habinsaran Village

The feasibility of coffee farming describes whether it is economically profitable. The feasibility of coffee farming in the research area is measured by calculating the revenue-cost ratio (RCR), as shown in the following table.

Table 4.15 Feasibility of Arabica Coffee Farming in Situmeang Habinsaran Village

No	Description	Unit	PerFarmer	Per Hectare
1	Reception	Rp	8,563,212.78	13,150,321.20
2	Production cost	Rp	2,062,270.37	3,247,485.22
3	Revenue Cost Ratio	-	4.27	4.27

Source: Income and Efficiency Level of Arabica Coffee Farming in Situmeang Habinsaran Village

The table shows that the RCR value for coffee farming in the research area is 4.27 or $RCR > 1$, namely revenue divided by production costs. So, coffee farming in the research area is still worth pursuing because the RCR is > 1 . The RCR value = 4.27 illustrates that by spending Rp. 1, the Farmer will receive an income of Rp. 4.27, resulting in a net income of 3.27. This shows that coffee farming is still worth cultivating or developing in the research area because it benefits coffee farming managers economically. So hypothesis 3, which states that "Arabica coffee farming in Situmeang Habinsaran Village is worth pursuing," can be accepted.

6. Sales System

The following is the Arabica coffee sales system in Situmeang Habinsaran Village.

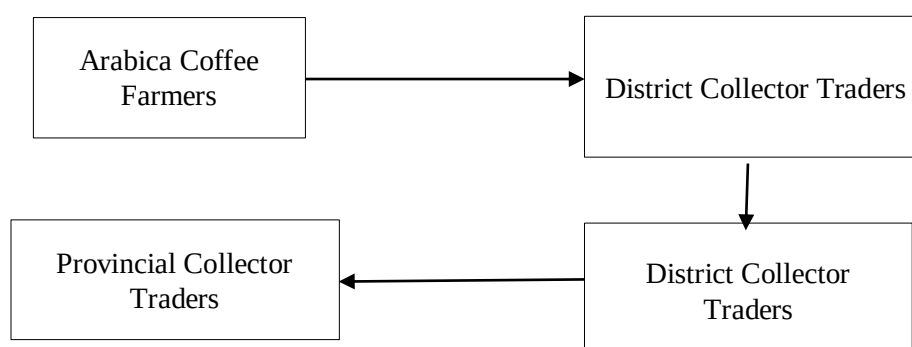


Figure 1. Sales System

Arabica coffee farmers in Situmeang Habinsaran Village sell their coffee harvest to sub-

district traders at the Tarutung market at a selling price of IDR 24,500/Kg. Next, sub-district collectors market the coffee to district collectors for IDR 25,500/Kg. Then, the district-collecting traders market the coffee to provincial traders who collect it from several districts.

Conclusion

Based on the results of the research and discussion, the following conclusions can be drawn:

1. The total production cost of Arabica coffee farming in the research area is IDR 24,747,244.44/Farmer or IDR 38,969,822.66/Ha for one year. Revenue from coffee farming amounts to IDR 102,758,553.33 Kg/Farmer or IDR 157,803,854.44 Kg/Ha.
2. The net income of coffee farming for one year is Rp.98,325,542.22/Farmer or Rp.152,317,561.41/Ha.
3. The RCR value for coffee farming in the research area is 4.27 or $RCR > 1$, meaning that by incurring costs of Rp. 1, coffee farmers will receive revenue of IDR 4.27 and net income of IDR 3.27. This shows that coffee farming is still feasible to cultivate or develop in the research area.
4. The Arabica coffee sales system in the research area is that Arabica coffee farmer respondents sell their harvest to regional collectors for IDR 24,500/Kg, then sell it to district collectors, and then market it to provincial collectors at a higher price.

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