

Income Analysis and Cost of Orange Grove Farming Business (Case Study in TanjungBeringin Village of Sumbul District of Dairi Regency)

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ARTICLE INFORMATION

Publication Information

Research Article

HOW TO CITE

Sembiring, M. (2021). Income Analysis and Cost of Orange Grove Farming Business (Case Study in TanjungBeringin Village of Sumbul District of Dairi Regency). *Journal of International Conference Proceedings*, 4(3), 371-379.

DOI:

<https://doi.org/10.32535/jicp.v4i3.1339>

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Received: 27 November 2021
Accepted: 6 December
Published: 22 December 2021

ABSTRACT

The purpose of this study was to find out how much income and efficient value level of oranges in orange groves in TanjungBeringin village. Determination of the location of the study is done purposive sampling (direct pointing) with data collection saturated sampling technique is a sampling technique that makes all members of the population as samples. With the condition that the existing population is less than 30 people, because there are as many as 20 people. The method of data collection is done by interview. Data analysis techniques used to calculate income, cost and the level of efficiency value of citrus farming businesses using the R /C Ratio analysis tool. The results of the study showed the total cost, income, and profits of citrus farming business. The total cost of producing oranges is Rp1.600.000.000/year and an average of 80.000.000/members of the peasant group/ha/yr. Total orange income of Rp2.720.000.000/year with an average of Rp136.000.000/member of the farmer group/ha/yr. The value of R /C Ratio of citrus farming business of 2.7 is feasible to implement.

Keywords: Expenses, Farm Business, Income, Oranges

JEL Classification: M2, M10, M19

INTRODUCTION

The country of Indonesia is an archipelagic country, most of Indonesia's land is surrounded by oceans or oceans. This causes Indonesia to be a country with a marine climate. Indonesia is located on the equator and includes a wet tropical climate. This situation causes the Indonesian region to generally have warm temperatures, high humidity, and high rainfall. Therefore, the Indonesian region has fertile soil, suitable for agricultural land and has dense forests. In addition to being influenced by the equator, the shape of Indonesia's territory as an archipelagic country "Indonesia is known as an agricultural country, where the main livelihood of the population is in the field of agriculture" (Sjamsir & Rappana, 2017)

Agriculture has an important role for the Indonesian economy. The number of people who make a living in the agricultural sector is not small, as are national products that come from agriculture. This means that agriculture is the main sector that accounts for almost half of the economy. "One type of sectoral development that is expected to have a very important "dual" role in accelerating economic growth as well as being an agent for regional development is the agricultural sector" (Mutaali, 2017). Farming is one of the entrepreneurial skills in terms of producing and selling agricultural products. Therefore an "entrepreneur must be equipped with high entrepreneurial skills to be better prepared to face competition in the business world. (Hendrayanti, 2021)

Dairi Regency is one of the regencies that has quite large agricultural potential. One of them is oranges which are currently cultivated in TanjungBeringin village, located in Dairi district, which is one of the citrus producing areas in North Sumatra. Currently, many residents make a living as farmers who cultivate oranges. Therefore, it is hoped that there will be economic progress for the residents of the Tanjung Banyan village. Besides being able and proficient in the management of citrus cultivation, farmers are also expected to be able to manage their finances, "If they control their finances well by separating personal finances and business activities, they will have good financial literacy as well" (Ardila & Febrianti, 2021) Citrus farmers recently received attention from the government, such as news on (Tempo, 2021) RI Minister of State-Owned Enterprises (BUMN) Erick Thohir together with BRI President Director Sunarso Sunday 5 December visited an agricultural business cluster called Al Barokah which has been running its business since 2015.

Citrus farming in Dairi district, especially the people of TanjungBeringin, Sumbul sub-district, began cultivating citrus plants starting in 2015 and starting to produce them in 2019 for sandy citrus plants and juvenile orange plants in 2020. In doing farming activities, every family must involve their children and wife. There are even some families who have become single parents (wives) who themselves take care of the citrus farming business. "Family success cannot be separated from the role of women as important actors. Therefore, it is hoped that the positive resources of women through the reciprocal use of social capital depicted in small industrial enterprises can be an inspiration for small businesses and women in Indonesia to keep workin (Kimbal, 2021)

Table of land area and citrus productivity in TanjungBeringin village, Sumbul sub-district, Dairi district:

NO	YEAR	LAND AREA (HA)	PRODUCTIVITY (TON/HA)	INCOME (Rp/ha/Thn)
1	2015	20	-	-
2	2016	20	-	-
3	2017	20	-	-
4	2018	20	-	-
5	2019	20	90	50.400.000
6	2020	20	225	126.000.000
7	2021	20	300	168.000.000

Source: *Farmers in Sumbul District, TanjungBeringin Village.*

With a fairly large land area, Dairi district has considerable potential in developing citrus production, one of which is Sumbul sub-district, TanjungBeringin village. Oranges are a source of income for most of the population in addition to other activities. This is inseparable from the assistance of the local government which always provides guidance to farmers so that their production can be increased so that the income of citrus farming continues to increase.

Until now, information about the efficiency and income problems of citrus farming in TanjungBeringin village is still limited, while the results of this analysis of citrus farming income show whether citrus farming is feasible or not feasible to develop. With this background, the authors are interested in conducting research and discussing these problems through writing a thesis with the research title: "**Analysis of Income and Costs of Orange Farming Business** (Case Study in TanjungBeringin Village, Sumbul District, Dairi Regency)". In this regard, the formulation of the problem and the research objectives are

Formulation of The Problem

Based on the description that has been presented in the description above, the formulation of the problem can be formulated as follows:

1. How much is the income of citrus farming in TanjungBeringin Village, Sumbul District, Dairi Regency?
2. What is the level of efficiency in the citrus farming business in TanjungBeringin Village, Sumbul District, Dairi Regency?

Research Purposes

1. This study aims to determine the income of citrus farming in TanjungBeringin Village, Sumbul District, Dairi Regency.
2. This study aims to determine the level of efficiency of the citrus farming business in TanjungBeringin Village, Sumbul District, Dairi Regency.

LITERATURE REVIEW

Definition of Farming

In the book of farming science theory and application. (Darwis, 2017) farming science is the study of how a person allocates existing resources effectively and efficiently to obtain high profits at a certain time.

Production Cost

Production costs are costs used in the production process which consist of direct materials, direct labor, and factory overhead costs. These production costs are also called product costs, namely costs that can be associated with a product where these costs are part of inventory (Dison, 2019).

Income

Revenue is income derived from the main activities of the entity in the form of income from the sale of services and merchandise (Bahri, 2016).

Efficiency

Efficiency is an effort to minimize costs in order to get more results. "The use of production factors is said to be efficient if it can produce maximum profits". (Sjaroni, 2019)

Fixed Cost and Variable Cost

According to (Mulyadi, 1978) Fixed costs are costing whose total amount remains within the range of a certain volume of activity, an example of fixed costs is the manager's salary. Variable costs are the total amount that changes in proportion to changes in the volume of activity, for example the cost of raw materials.

RESEARCH METHOD

Types of Research

The data obtained in this study is secondary data. Secondary data is data obtained from documents, reports and or directly from the authorized agency. The data needed are in the form of observations and interviews, while the data source comes from the community in "TanjungBeringin village, Sumbul sub-district, Dairi district, North Sumatra".

Operational Definition

In order to obtain clearer information about what is being researched in accordance with the above concept, the operational definition can be stated as follows.

1. Respondents are farmers who carry out citrus farming and have done harvesting.
2. Production of oranges, namely the amount of citrus produced (Kg).
3. Production costs are costs incurred during the production process; these costs include:
 - a. The cost of production facilities includes the cost of purchasing seeds, fertilizers, and pesticides
 - b. Equipment depreciation costs are costs obtained by calculating the purchase cost tool divided by the useful life of the tool concerned (straight line).
 - c. Labor costs are costs incurred either for family labor or labor wages, this fee is calculated based on the prevailing wages at the research site based on People's Day Conserved work (HOK) is equivalent to that of adult men (Rp).
4. Revenue is a unit of rupiah which is calculated based on the amount of production (output) sold at the prevailing price (Rp).

5. Income is the difference between the total revenue from the citrus farming business minus the costs incurred issued during the growing season (Rp).
6. Price is the selling price of oranges at the farmer level at the research location (Rp/kg). Meanwhile, according to Saladin (2003), price is a sum of money as a medium of exchange to obtain products and services.

Other costs are costs incurred by farmers in oranges and other costs that support the production and post-harvest processes such as marketing costs, fuel costs expressed in units (Rp).

Population and Sampling

Determination of the research location is done by purposive sampling (direct pointing) with data collection saturated sampling technique is a sampling technique that makes all members of the population as a sample. Provided that the population is less than 30 people.

Data Collection Technique

Interview is a data collection technique that is done by asking questions and listening to answers directly from the main source of data (Lubis, 2012). The interview technique is carried out if the researcher requires communication or a relationship with the respondent.

Data Analysis Technique

The stages of data analysis in this study are as follows:

1. Total Cost

Total cost is "the total cost incurred in producing goods and services at company" (Busra & Anisah, 2020). The total cost is calculated by the following formula:

$$TC = TFC + TVC$$

Information:

TC = Total Cost/Total Cost (Rp)

TFC = Total Fixed Costs/Total Fixed Costs (Rp)

TVC = Total Variable Cost/Total Variable Cost (Rp)

2. Reception

To find out the amount of revenue obtained can be known by using the formula:

$$TR = P \times Q$$

Information:

TR = Total Revenue/Total Revenue (Rp)

P = Product Price/Price (Rp)

Q= Number of Products/Quantity (kg)

3. Income

Revenue is calculated by subtracting the total revenue from the total cost, using the formula

as follows:

$$I = TR - TC$$

Information:

I = Income/Income (Rp)

TR = Total Revenue/Total Revenue (Rp)

TC = Total Cost/Total Cost (Rp)

4. Efficiency

Orange Farming Efficiency is a comparison between revenues and costs where the revenue is greater than the total cost. To find out the R/C ratio obtained by orange farmers in TanjungBeringin village, Sumbul district, Dairi district, is

$$\text{R/C ratio} = \frac{\text{TR}}{\text{TC}}$$

Information:

R/C ratio = Comparison between revenue and costs

TR = Total Revenue/Total Revenue (Rp)

TC = Total Cost/Total Cost (Rp)

Decision:

R/C ratio >1= Means that the business is doing economically efficient or profitable.

R/C ratio <1= Means that the business carried out is economically inefficient or unprofitable.

R/C = 1 = Means that the business is breaking even.

RESULTS

Orange Farming Production Cost

Variable Cost

1. Seed Cost
2. Fertilizer Cost
3. Fuel Cost
4. Pesticide Cost
5. Labor cost

Fixed Cost

1. Tool Depreciation Cost

Table of Production Costs for Citrus Farming:

NO	DESCRIPTION VARIABLE COST	COST (Farming Family/Rp/year)	COST (Average IDR/ha/year)
1	a. Seeds	128.000.000	6.400.000
	b. Fertilizer	192.000.000	9.600.000
	c. Pesticide	676.000.000	33.800.000
	d. Labor	480.000.000	24.000.000
	e. BBM	24.000.000	1.200.000
TOTAL VARIABLE COST 1.500.000.000			75.000.000

2. FIXED COST	COST (Farming Family/Rp/year)	COST (Average IDR/ha/year)
Tool Depreciation	100.000.000	5.000.000
Total Fixed Cost	100.000.000	5.000.000

Table of Average Income Recapitulation of Citrus Farmers:

No	Description	Amount (Farming Family/Rp/year)	Amount (Average Rp/ha/year)
1	Sale	4.320.000.000	216.000.000
2	Total Cost	1.600.000.000	80.000.000
3	R/C ratio	2,7	2,7
4	Net Profit	2.720.000.000	136.000.000

Orange Farming Efficiency Level

To find out whether citrus farming in Tanjung Beringin village, Sumbul sub-district, Dairi district is feasible or not, it is known by the R/C ratio, which is dividing the total revenue (TR) by the total cost (TC).

$$R/C = \frac{TR}{TC} = \frac{216.000.000}{80.000.000} = 2,7$$

Siam Orange Farming Revenue Report Table in Tanjung Beringin Village:

Sales of Orange Farming	Rp
4.320.000.000	
Production cost	
Seed Load Rp 128.000.000	
Fertilizer Load Rp 192.000.000	
Pesticide Load Rp 676.000.000	
Labor Load Rp 480.000.000	
Tool Depreciation Expense Rp 100.000.000	
Fuel Load Rp 24.000.000(+)	
Business costs	Rp
1.600.000.000 (-)	
Net Profit of Orange Farming	Rp
2.720.000.000	

Citrus Farming Feasibility Report Table:

NO	Commodity Type	Income	Total Cost	R/C Ratio
1	Orange	4.320.000.000	1.600.000.000	2,7

DISCUSSION

The existence of cost analysis data and the coefficient value of Siamese citrus farming will make farmers more enthusiastic and develop their citrus farming in Tanjung Beringin village, Sumbul district, Dairi district. By knowing the coefficient value of 2,7 it is feasible to be developed. If the analysis is carried out, then the citrus farming income for 20 members of the farmer group in Tanjung Beringin village is Rp2.720.000.000/year with an average of Rp136.000.000/member of farmer group/ha/year. Income results are also obtained from the table on the income report of Siamese citrus farming in Tanjung Beringin village. The total cost of producing oranges is Rp1.600.000.000/year and an average of Rp80.000.000/member of a farmer group/ha/year. The results of the total costs obtained from the table of production costs for citrus farming. With the coefficient value, the greater the value will definitely affect the income, so that with that the farmers will continue to increase the citrus farming business so that it continues to develop.

CONCLUSION

The income of citrus farming for 20 members of farmer groups in TanjungBeringin village is Rp2.720.000.000/year with an average of Rp136.000.000/member of farmer group/ha/year. Dairy district to be worked on with an R/C Ratio value of 2,7 worthy. For farmers in TanjungBeringin village, Sumbul sub-district, Dairy district, they can take into account variable costs such as fertilizer costs, pesticide costs and labor costs so that these costs can be allocated appropriately and increase agricultural yields by increasing plant types on one land so that income from citrus farming and other income will increase even more.

The government and related agencies in agriculture in Dairy district pay more attention to farmers, especially in TanjungBeringin village, Sumbul sub-district by selling subsidized pesticides and fertilizers so that farmers can minimize production costs so that farmers' income and welfare can increase. The government provides subsidized fertilizers to farmers in order to support national food security. The provision of subsidized fertilizers must meet the six main principles that have been proclaimed or called 6T, namely the right type, the right amount, the right price, the right place, the right time, and the right quality (Sarwo, 2021). Farmers really expect government assistance in improving their welfare. Like the efforts of Karo Regency farmers, they deliver gifts in the form of 3 tons of citrus fruits to President Jokowi and hope that their village will be taken care of, especially the damaged roads. (Antara, 2021)

LIMITATION

Based on the results of the previous research and discussion, some limitations can be drawn in this study, namely as follows:

1. Researchers only used a sample of orange farmers, while in Tanjung Beringin village there are not only citrus farmers, there are still many farmers other than oranges. Therefore, further research is expected to expand the research sample to farmers other than citrus in Tanjung Beringin village.
2. Further researchers can add and expand the research sample, not only in one sub district but can take samples from various sub-districts/villages.

ACKNOWLEDGMENT

The researcher realizes that this research will not be completed without prayers, support and encouragement from various parties. On this occasion, the researcher would like to express gratitude to:

1. Prof. Dr. Agussani. as Chancellor of North Sumatera Muhammadiyah University (UMSU).
2. Association of International Business and Professional Management AIBPM) as the organizer of international seminar events.
3. All university students in Universitas Muhammadiyah Sumatera Utara who have helped in providing data and information for the purpose of this research.
4. UMSU lecturers and other universities who have provided support while doing this research.
5. All parties who cannot be mentioned one by one, thank you for helping the process of writing this research.

DECLARATION OF CONFLICTING INTERESTS

The author has no conflict of interest in writing this article.

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