



Analysis Of Chili Farmers' Income In Enrekang Regency, South Sulawesi

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ABSTRACT

This study aims to analyze the income of chili farmers in Enrekang Regency, South Sulawesi. As one of the leading agricultural commodities, chili plays a significant role in the local economy; however, farmers' income is often influenced by various factors, such as market prices, production costs, and productivity levels. This study employs a descriptive quantitative approach using a survey method to collect data from 70 chili farmers spread across several sub-districts in Enrekang Regency. The data analysis techniques used include descriptive analysis and multiple linear regression to identify the factors influencing chili farmers' income. The results indicate that the average income of chili farmers in Enrekang Regency varies significantly, depending on weather conditions, access to production facilities, and market selling prices. The most significant factors influencing farmers' income are production costs, chili selling prices, and yield per hectare. According to the research findings based on regression analysis the result showed, the profits earned by farmers ranged from Rp. 4,399,021, with considerable variation. Selling price of chili peppers is Rp. 3,542.05 kg/ha, cost of chili seeds averages Rp. 3,456,143.35. This may be influenced by seed variety selection, seed quality, and differing purchasing strategies among farmers.

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INTRODUCTION

The agricultural sector plays a crucial role in Indonesia's economy, particularly in terms of Gross Domestic Product, with horticultural commodities such as red chili peppers being a significant contributor that not only meets household food needs but also serves as a raw material for the pharmaceutical industry ([Soemargono, 1977](#)). Nevertheless, this sector faces the challenge of price fluctuations, which have a direct impact on farmers' incomes, particularly those growing red chili peppers, which have high economic value ([Eliyatiningsih et al., 2025](#); [Jumaguni et al., 2024](#)). This analysis will scrutinize the factors influencing chili farmers' income, distinguishing profitable enterprises from those that are not ([Sondakh & Rengku, 2017](#)). Furthermore, this research endeavors to quantify the average income generated by chili farming operations, thereby providing a robust empirical foundation for policy interventions aimed at enhancing agricultural sustainability and farmer welfare ([Eliyatiningsih et al., 2025](#); [Haryono et al., 2025](#)). Specifically, this study will investigate how factors such as land area, access to credit, and implementation of good agricultural practices correlate with the revenue and overall profitability experienced by chili farmers ([Hasvi & anistia, 2025](#); [Yanita & Rahman, 2021](#)). Furthermore, the study will assess the feasibility of chili farming by analyzing cost-benefit ratios and return on investment, thereby providing insights into the economic viability of this horticultural commodity ([Ratnawati et al., 2019](#); [Subastian & Yuliawati, 2024](#)). The outcomes of this investigation are anticipated to inform targeted interventions and policy adjustments designed to mitigate market volatility and bolster the economic resilience of agricultural communities engaged in chili cultivation ([Syahidin & M, 2021](#)). Moreover, the research will explore the potential for enhancing farmer income through efficient resource utilization and diversification strategies, contributing to the broader discourse on agricultural development ([Nasution & Sagala, 2016](#)). This is particularly relevant given that agriculture serves as a primary source of national income, promotes economic growth, and generates employment opportunities ([Nurhapsa et al., 2015](#)). Given its substantial contribution to the national economy, understanding the financial intricacies of key horticultural subsectors, such as chili cultivation, becomes imperative ([Soemargono, 1977](#)). The increasing demand for horticultural products, particularly red chili, underscores its strategic importance as a leading commodity with significant economic value, widely cultivated across Indonesia ([Fadah, 2015](#); [Yanita & Rahman, 2021](#)). However, the productivity of red chili often falls below its genetic potential, impacting the profitability for farmers ([Agustina et al., 2022](#)). This disparity between potential and actual yield often results from suboptimal agricultural practices, limited access to capital for essential inputs, and inadequate market infrastructure ([Hasvi & anistia, 2025](#)). Consequently, optimizing these factors is critical for improving both yield and farmer income, especially considering that chili remains a significant contributor to foodstuff inflation due to supply fluctuations ([Mariyono, 2020](#)). Despite these inherent challenges, the cultivation of chili remains a vital agricultural pursuit, with large chili varieties consistently outperforming cayenne pepper in productivity, suggesting significant profit opportunities for farmers ([Widaninggar et al., 2023](#)). Furthermore, the labor and material-intensive nature of chili farming, particularly when transitioning from

staple crops, has been shown to significantly boost rural economies through substantial multiplier effects, doubling farmer incomes and increasing market activity for agricultural inputs and products ([Mariyono, 2016](#)). The economic importance of chili is further underscored by its significant contribution to national and regional economies, playing a critical role in daily consumption patterns within Indonesia ([Purba et al., 2022](#)). This underscores the necessity of comprehensive research to understand and optimize the profitability of chili farming, especially given that Indonesia is a prominent agrarian nation where agriculture serves as a foundational pillar for livelihoods and national development ([Andrie & Novianty, 2021](#); [Susanawati et al., 2021](#)).

METHOD

This study employed a descriptive quantitative approach and was conducted in Baroko Village, Enrekang Regency. The study was conducted over a two-month period, from February to March 2025. The sample size for this study was determined using the Slovin formula, which indicated a population of approximately 233 respondents; consequently, a sample of 70 respondents was selected to represent the characteristics of the population. Data collection techniques included questionnaires, observations, and interviews. The data were then analyzed using analysis regression.

$$Y' = \beta_0 + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \beta_4x_4 + e$$

Information:

Y'	= Chili Farmer Income
β_0	= Constant
β_1 - β_4	= Regression Coefficient
X_1	= Selling Price (Rp/Kg)
X_2	= Chili Production (Kg)
X_3	= Seed Cost (Rp)
X_4	= Land Area (Ha)

Sampling Technique

The sampling technique employed was purposive sampling, based on the criteria that farmers must be actively involved in chili cultivation, have five years' experience, own a plot of land measuring 0,5 ha, and be members of a farmers' group.

RESULTS AND DISCUSSION

Factors Affecting Chili Farmers' Income

Selling Price (X1)

Table 1. Demographic Characteristics of Participants (N = 250)

Selling Price	Number of Person	Ratio (%)
20.000	15	21,43%
30.000	30	42,86%
40.000	20	28,57%
50.000	5	7,14%
Total	70	100

Source: Primary Data Processed, 2025

Table 1 shows the number of chili farmer respondents grouped by selling price per kilogram (Rp/kg) and the percentage share of each price group. Of the total 70 respondents, the data reveals a fairly interesting variation in the selling prices received by farmers. A total of 15 respondents (21.43%) sold their chili peppers at a price of Rp 20,000 per kilogram. This percentage is relatively small compared to other price groups, indicating that only a small proportion of farmers sell their chili peppers at this lower price. Factors influencing this selling price may be related to chili pepper quality, low market demand, or other factors such as a bountiful harvest. The most common price range is Rp 30,000 per kilogram, with 30 respondents (42.86%) falling into this category. This price is the most commonly accepted by chili farmers, reflecting a balance between market demand and a price that remains affordable for consumers. This suggests that the Rp 30,000 price is the most stable and widely accepted selling price among the majority of farmers. A total of 20 respondents (28.57%) sold their chili at Rp 40,000 per kilogram. Although the number of farmers selling at this price is lower compared to the Rp 30,000 price group, this figure is still quite significant. This indicates that there is a segment of farmers capable of obtaining higher prices, which may be related to better chili quality, more efficient supply management, or the availability of more profitable distribution channels. Only 5 respondents (7.14%) sold their chili peppers at a price of Rp 50,000 per kilogram. This price group had the smallest percentage, which may be due to limited market demand at higher prices or the superior quality of the chili peppers. Nevertheless, this selling price indicates that some farmers have successfully capitalized on premium market opportunities, albeit in limited numbers. Overall, the majority of chili farmers (42.86%) sold at a price of Rp 30,000 per kilogram. This reflects the most common price and likely represents the market equilibrium point. Additionally, there is price variation, with some farmers able to sell at higher prices (Rp 40,000 to Rp 50,000), though in smaller quantities. The decrease in the number of farmers selling at higher prices indicates that factors such as quality, market demand, and pricing policies play a significant role in determining chili selling prices.

Chili Production (X2)

Table 2. Number Of Chili Farmers based on Chili Production (Kg)

Chili Production	Number of Person	Ratio (%)
2.000	25	35,71%
5.000	45	64,29%

Source: Primary Data Processed, 2025

Table 2 shows the number of chili farmer respondents based on chili production levels per hectare (kg/ha). Of the total 70 respondents, there were two main production categories considered in this study. A total of 25 respondents (35.71%) reported that their chili production was 2,000 kg per hectare. This figure indicates that a portion of chili farmers operate at a relatively low production level. This may be influenced by various factors, such as soil quality, the agricultural techniques employed, or challenges related to the maintenance and care of chili plants. Farmers producing at this level may also face challenges in managing limited natural resources and agricultural inputs.

The majority of respondents, namely 45 people (64.29%), reported that they successfully produced 5,000 kg of chili peppers per hectare. This indicates that most chili pepper farmers can achieve higher production levels. Factors that may contribute to this increase in production include the use of more advanced agricultural technologies, the selection of high-yielding chili pepper varieties, and more efficient land management. Additionally, these results may reflect improved skills in cultivation and farm management that support higher productivity. Overall, the majority of chili farmers (64.29%) reported chili production reaching 5,000 kg per hectare, indicating a higher level of productivity. Meanwhile, approximately 35.71% of the remaining farmers produced chili peppers at a lower rate, namely 2,000 kg per hectare. These findings suggest that there is a gap in production levels among chili farmers, which is likely influenced by technical factors, available resources, and farmers' experience. Therefore, efforts are needed to improve farmers' access to better agricultural technology and training to increase overall chili production.

Costs of Seed (X3)

Table 3. Number Of Chili Farmers based on Cost of Seed (Idr)

Cost of Seed	Number of Person	Ratio (%)	Category
2.000.000	20	28,57%	Low
3.000.000	30	42,86%	Middle
4.000.000	15	21,43%	High
5.000.000	5	7,14%	Very High

Source: Primary Data Processed, 2025

Overall, the majority of chili farmers (42.86%) spent Rp 3,000,000 on seed purchases, which falls into the medium-cost category. This indicates that most farmers tend to choose options that offer a balance between price and quality. However, some farmers opt for lower- or higher-cost options, depending on their needs and goals in chili cultivation. The choice of seed cost depends heavily on the farmers' financial situation, as well as their long-term goals regarding chili pepper production. Factors influencing farmers' decisions when purchasing seeds vary widely, such as limited funds or the selection of seed varieties that are cheaper but still capable of meeting production needs.

Land Area (X4)

Table 4. Number Of Chili Farmers based on Land Area (Ha)

Land Area	Number of Person	Ratio (%)
0,5	30	42,86%
1,0	25	35,71%
2,0	10	14,29%
3,0	5	7,14%

Source: Primary Data Processed, 2025

A total of 30 respondents (42.86%) own 0.5 hectares of land. This group is the largest, indicating that the majority of chili farmers manage small-scale plots. This 0.5-hectare plot size may be chosen due to the farmers' limited resources or capital. Additionally, smaller plots facilitate crop management and minimize the risk of losses. A total of 25 respondents (35.71%) manage plots of 1 hectare. This group is also quite significant and indicates that the majority of chili farmers choose to manage medium-sized plots. A 1-hectare plot may offer greater opportunities for increased production, although it requires more capital and labor compared to smaller plots. Farmers with this land area likely have greater experience and capital to manage their chili farming operations. A total of 10 respondents (14.29%) own 2 hectares of land. This indicates the presence of a group of farmers who are more committed to managing chili cultivation on a larger scale. Land of this size allows for increased production and economies of scale, although it requires more complex management and carries higher potential risks, particularly regarding water supply, fertilization, and pest control. A total of 5 respondents (7.14%) manage 3 hectares of land, constituting the group with the fewest respondents. This group can be considered farmers with a larger business scale. Although their number is small, farmers with 3 hectares of land have greater potential to produce larger quantities of chili peppers, but they also face greater challenges related to land management and higher operational costs. Most chili farmers (42.86%) manage plots of 0.5 hectares, indicating that many operate on a small scale. However, there are also groups of farmers who manage larger plots, with 35.71% owning 1 hectare and 14.29% owning 2 hectares. Only a small number of farmers (7.14%) own plots of 3 hectares, reflecting larger-scale operations. This variation in plot size indicates that chili farmers employ diverse strategies in managing their agricultural operations, depending on available resources, experience, and their long-term goals.

Analysis SPSS

	Descriptive Statistics		
	Mean	Std. Deviation	N
Profit	4399021.52	2001682.234	70
Selling Price	35285.25	11128.055	70
Productio	3542.05	1510.15	70
Cost of Seed	3456143.35	1150749.22	70
Land Area	149.22	0,97.11	70

The table above shows the results of a descriptive analysis of several variables related to chili farmers. The variables analyzed include profit, selling price, production, seed costs, and land area. The average profit earned by chili farmers is Rp 4,399,021.52. This indicates that while some farmers achieve significant profits, others experience smaller profits, which may be caused by various factors such as fluctuating selling prices, operational costs, or issues with harvest management. The selling price of chili

peppers reported by farmers averages Rp 35,285.25 per kilogram. This price variation can be attributed to several factors, including chili pepper quality, distribution channels, and market conditions that vary from one region to another. The average reported chili pepper yield is 3,542.05 kg per hectare. This may be due to differences in agricultural practices, technology use, or natural factors such as climate and weather that affect crop yields. The cost of chili seeds averages Rp 3,456,143.35. This may be influenced by seed variety selection, seed quality, and differing purchasing strategies among farmers. The average land area managed by chili farmers is 149.22 hectares. This variation may be attributed to financial factors, access to land, and the farmers' level of expertise in managing agricultural land. Overall, these data indicate significant variation in terms of profits, selling prices, production, seed costs, and land area among chili farmers. The large variation in each of these variables indicates that chili farmers face highly varied conditions, influenced by many factors such as seed quality, land management, market prices, and the technology used. Therefore, it is important to implement interventions that can help farmers increase production and income, such as more effective agricultural training, improvements to distribution infrastructure, and increased access to better agricultural technology.

CONCLUSION

Based on the results of the data analysis, which included variables such as profit, selling price, production, seed costs, and the land area of chili farmers, the following key findings can be concluded:

1. **Farmers' Profits:** The average profit earned by chili farmers was Rp 4,399,021.52. This indicates that while most farmers achieved good profits, there were also farmers who earned lower profits, likely due to differences in production factors and market fluctuations.
2. **Chili Pepper Selling Price:** The average selling price of chili peppers is Rp 35,285.25 per kilogram, indicating variations in selling prices among farmers. Factors such as chili pepper quality, distribution channels, and local market dynamics contribute to the differences in prices received by farmers.
3. **Chili Pepper Production:** The average chili pepper yield is 3,542.05 kg per hectare, indicating significant variations in yield among farmers. This may be influenced by the use of agricultural technology, soil conditions, and weather and climate factors that are not always consistent.
4. **Seed Costs:** The average seed cost incurred by chili farmers is Rp 3,456,143.35. This variation in seed costs indicates that farmers incur varying costs depending on the type of seed selected, seed quality, and their access to agricultural resources.
5. **Land Area:** The average land area managed by farmers is 149.22 hectares. This variation in land area reflects differences in the scale of operations among farmers, which may be influenced by economic factors, access to land, and each farmer's financial capacity.

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