

# A Study On The Income Levels Of Patchouli Farmers In Taramanu Tua Village, Tutar District, Polewali Mandar Regency

Mahmud <sup>\*1</sup>, Nining Diah Andayani <sup>2</sup>, Adiputra Rahman <sup>3</sup>

<sup>\*1</sup> Institute of Technology and Business Muhammadiyah Polewali Mandar

<sup>2</sup> Institute of Technology and Business Muhammadiyah Polewali Mandar

<sup>3</sup> Institute of Technology and Business Muhammadiyah Polewali Mandar

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## ARTICLE INFO



ISSN: 2620-6196  
Vol. 8 Issue 1 (2025)

### Article history:

Received - July 12, 2025

Revised - July 20, 2025

Accepted - 02 Augst 2025

### Email Correspondence:

[mahmud.agr21@itbmpolman.ac.id](mailto:mahmud.agr21@itbmpolman.ac.id)

### Keywords:

Income; Patchouli Farmers; Price  
Fluctuation; Production Costs;  
Taramanu Tua Village

## ABSTRACT

This study aims to analyze the income earned by patchouli farmers in Taramanu Tua Village and to identify the factors that influence their earnings. A qualitative approach was employed using observational methods, with data collected through in-depth interviews with patchouli farmers in the village. A total of 20 patchouli farmers participated as respondents.

The findings indicate that the income of patchouli farmers is influenced by several key factors, including land area, fluctuations in patchouli oil selling prices, and high production costs, which encompass plant maintenance, fertilizer purchases, and labor expenses. Although patchouli farming holds considerable potential, price volatility remains a major challenge affecting income stability. Furthermore, the limited land area owned by most farmers restricts their ability to significantly increase production.

Therefore, this study recommends several strategies, such as market diversification, improved cost-efficiency in production, and the adoption of more advanced agricultural technologies, in order to enhance the welfare of farmers in Taramanu Tua Village.

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## INTRODUCTION

Patchouli (*Pogostemon cablin* Benth.) is a tropical shrub known for producing essential oil from its leaves, widely used in the perfume, cosmetic, and aromatherapy industries. Patchouli oil is considered a valuable commodity in global trade (Rahmayanti, 2022). The primary part of the plant utilized is its leaves, which are distilled to extract patchouli oil (Jayarti, 2023).

In Indonesia, patchouli is cultivated either as an intercrop or as a monoculture crop. However, its development faces several challenges: farming techniques are still largely traditional and shifting; cultivation is often small-scale and treated as a side business; crops are grown on suboptimal land; non-certified or self-propagated seeds are commonly used; plant maintenance is inadequate—including fertilization, pest, and disease control; and post-harvest processing is poorly managed, which impacts both the yield and quality of the oil produced (Eva Lizarmi et al., 2022).

Currently, the main centers of patchouli oil production in Indonesia are located in Sulawesi (South Sulawesi, Southeast Sulawesi, and Gorontalo), as well as in parts of Sumatra (Aceh, North Sumatra, and West Sumatra), and several regions in Java. Most of the patchouli oil produced is exported to industrial countries (Ditjenbun, 2020). Cultivation of patchouli continues to shift between regions and provinces, often moving to newly cultivated lands (Ditjenbun, 2022).

The agricultural sector is one of the main pillars supporting the livelihoods of rural communities in Indonesia. Among the various agricultural commodities, patchouli stands out due to its considerable economic value. Its essential oil, with a distinctive aroma, is highly sought after in both domestic and international markets, especially in the cosmetics and pharmaceutical industries. In many regions—

including Taramanu Tua Village in the Tutar Sub-district—patchouli has become a prominent crop actively cultivated by local farmers. The community grows it not only on large plots but also in household yards, as a farming endeavor aimed at improving household economic well-being (Sahrinur, 2024).

The local community's interest in cultivating patchouli is driven by the plant's promising benefits and ease of cultivation. It also enjoys stable market demand, making it a preferred option for local farming systems. However, farmer income from patchouli cultivation is not necessarily high or stable. Several key factors influence this income, such as harvest yields, volatile market prices, and operational costs in each farming cycle. Thus, a comprehensive income analysis is required to better understand the economic potential of this sector for local farmers.

An income analysis of patchouli farming can reveal the actual earnings derived from this activity. The income level depends on both the revenue and expenses incurred by the farmers. Therefore, this study seeks to determine the magnitude of income generated from patchouli farming and processing in Taramanu Tua Village, Tutar Sub-district, Polewali Mandar Regency.

This research aims to answer three main questions: What is the income level of patchouli farmers in Taramanu Tua Village? What are the factors that influence their income? And how significant is the contribution of patchouli farming to the overall welfare of local farmers? Based on these questions, the objectives of this study are: to analyze farmers' income levels, to identify income-influencing factors, and to offer strategic recommendations to improve their earnings.

The study is expected to offer both theoretical and practical benefits. Theoretically, it may enrich discussions on the economic potential of patchouli farming. Practically, it can serve as a consideration for village authorities and policymakers to develop farmer-centered policies, and as a reference for future research focused on developing patchouli agribusiness as a leading rural commodity.

## **RESEARCH METHOD**

This research was conducted in Taramanu Tua Village, Tutar Sub-district, Polewali Mandar Regency. Several approaches were used to gather relevant data and information. The location was selected purposively, based on the consideration that the majority of the local population in Taramanu Tua Village engages in patchouli farming.

The population of this study comprises all patchouli farmers operating in the village. A survey method was employed, in which the main sources of data and information were obtained from respondents selected as samples, using questionnaires as the primary data collection instrument.

## **RESULTS AND DISCUSSION**

### **a. General Description of Taramanu Tua Village**

Taramanu Tua is a village located in the Tutar Sub-district, Polewali Mandar Regency, West Sulawesi Province. The village is recognized for its significant agricultural potential, particularly in the cultivation of patchouli. Patchouli plants thrive in this area due to its favorable tropical climate, characterized by stable temperatures throughout the year and adequate rainfall. In addition, the fertile soil in Taramanu Tua Village further supports optimal patchouli growth.

Patchouli is a plant known for its multiple benefits, especially in the cosmetics and perfume industries, as the oil extracted from its leaves and roots possesses a distinctive and long-lasting aroma. This commodity has become the primary source of income for many households in the village, with the majority of farmers relying on patchouli farming to support their livelihoods. Most of the agricultural land used for patchouli cultivation is owned by the local community.

Farmers in this village predominantly still rely on traditional farming methods, although a small number have begun adopting more modern agricultural technologies. Despite its vast potential, patchouli farming in the village requires further intervention in the form of improved cultivation

technologies and more professional farm management practices to fully maximize productivity and economic outcomes.

**b. Respondent Characteristics**

Farmer age plays a crucial role in shaping their approach to agriculture and their farm management practices. This demographic factor is closely linked to the level of knowledge and experience farmers possess in managing their agricultural activities. Generally, older farmers tend to have more extensive experience in farming techniques and in handling various challenges that may arise in agricultural operations. Their practices are often based on methods that have proven effective over years of hands-on experience.

However, older farmers may also face physical limitations, such as reduced stamina or health-related constraints, which can impact their productivity in the field. In contrast, younger farmers are often more open to change and more receptive to adopting new technologies. They tend to be more proficient in operating modern tools and agricultural innovations, such as mobile-based farming applications or efficient irrigation systems.

Nevertheless, younger farmers may still lack sufficient experience in addressing complex agricultural challenges, such as long-term land management or problem-solving that goes beyond technological solutions. Therefore, both experience and adaptability are essential components in optimizing farming practices across different age groups.

**Table 1: Age Distribution of Respondents**

Age Range (Years)	Age Range (Years)	Age Range (Years)
20-30	5	25%
31-40	10	50%
41-50	5	25%
<b>Total</b>	<b>20</b>	<b>100%</b>

Based on the data obtained, the majority of farmers in Taramanu Tua Village fall within the productive age group of 31 to 40 years, accounting for 50% of the total respondents. This age group demonstrates a balance of experience and physical capability, making them more adaptable to modern agricultural technologies. The next age group, 20 to 30 years, represents 25% of the respondents. Farmers in this category tend to be more open to innovation and new technologies, although they may still lack sufficient experience in dealing with more complex agricultural challenges.

Meanwhile, the 41 to 50-year-old group also comprises 25% of the respondents, indicating a segment of farmers with extensive experience who may, however, begin to encounter physical limitations that could affect their productivity in the field. Overall, the data suggest that the patchouli farming sector in Taramanu Tua Village is predominantly composed of farmers in their productive years, who possess strong potential to adapt to new technologies and manage agricultural enterprises more efficiently.

**c. Farming Experience**

Farming experience is another critical factor influencing the success of agricultural activities. It is closely related to a farmer’s ability to cope with challenges and to select and apply appropriate farming technologies. Experienced farmers tend to be more proficient in managing land and responding effectively to various issues such as pest outbreaks or sudden climate changes. Their experience also allows for more efficient use of resources, including production cost management.

However, experience alone does not guarantee success. Farmers with many years of experience may not necessarily overcome every challenge, especially if they are reluctant to innovate or adopt new technologies. Over time, experience teaches farmers how to manage their land more wisely, improve crop quality, and optimize labor use.

**Table 2: Farming Experience of Respondents**

Years of Experience	Number of Respondents	Percentage (%)
1-3	5	25%
3-6	15	75%
<b>Total</b>	<b>20</b>	<b>100%</b>

Based on the data obtained, the majority of farmers in Taramanu Tua Village have farming experience ranging from 3 to 6 years, accounting for 15 respondents or 75% of the total sample. This indicates that most farmers already possess a basic level of knowledge regarding planting patterns and agricultural techniques. Additionally, 25% of the respondents have between 1 to 3 years of experience, suggesting that they may still be in the learning phase and may require further guidance to improve their farming outcomes.

Although farmers with more years of experience tend to have greater knowledge, they also face challenges in adapting to the continuous evolution of agricultural technologies. Overall, most farmers in the village have sufficient experience to manage their farms. However, improving their knowledge and skills through training and the adoption of modern technologies remains crucial to enhancing their efficiency and productivity.

#### **d. Patchouli Farmers' Income**

The income of patchouli farmers in Taramanu Tua Village is influenced by multiple factors, including crop yield and the highly fluctuating selling price of patchouli oil. According to the data collected, the average income of patchouli farmers in the village is approximately IDR 2,500,000 per month. However, income levels vary significantly among farmers, depending on the size of land ownership, the ability to manage their farms, and external factors such as sharp fluctuations in market prices.

Price volatility is the most pressing challenge faced by patchouli farmers. The price of patchouli oil in the international market is heavily influenced by global supply and demand, which in turn affects farmers' income. This price uncertainty leads to unstable earnings, impacting farmers' ability to plan their finances and invest in the development of their farms.

**Table 3: Average Income of Patchouli Farmers**

Income Category	Amount (IDR)
Average Income	2.500.000
Highest Income	4.000.000
Lowest Income	1.500.000

Based on the data, the income of patchouli farmers in Taramanu Tua Village varies, with an average income of IDR 2,500,000 per month. The highest income recorded was IDR 4,000,000, while the lowest was IDR 1,500,000. This indicates a considerable disparity in income levels among farmers. Those earning higher incomes may own larger plots of land or successfully implement more efficient technologies and farming strategies. In contrast, farmers with the lowest earnings may face

land limitations, lack the skills to manage their farms effectively, or be more severely affected by fluctuations in patchouli oil prices.

These income disparities reflect the broader challenges in the patchouli farming sector, especially concerning price instability and high production costs. With such income variability, farmers in the village must manage their agricultural businesses more efficiently and wisely to increase earnings and reduce economic uncertainty.

Despite the significant potential in this sector, many farmers still earn relatively low incomes, with the lowest recorded at only IDR 1,500,000 per month. Therefore, it is imperative to address the factors affecting income, particularly by improving price stability mechanisms and enhancing the efficiency of production cost management.

**e. Factors Affecting the Income of Patchouli Farmers**

**1) Land Area**

The size of land owned by farmers significantly influences their income. The larger the cultivated area, the greater the harvest that can be obtained, which in turn increases earnings. However, not all farmers own large plots of land. Those with limited land must work harder and manage resources more efficiently to achieve optimal results.

**2) Selling Price**

The fluctuating market price of patchouli oil is a major determinant of farmer income. During favorable market periods, farmers can earn substantial profits. However, when prices fall, they may struggle to cover production costs and may even suffer financial losses.

**3) Production Costs**

Production costs include labor, plant maintenance, and the purchase of fertilizers or chemical inputs. High production expenses reduce the net profit earned by farmers. Therefore, efficient management of production costs is essential to maximize profitability.

**Table 4: Factors Affecting Patchouli Farmers' Income**

<b>Factor</b>	<b>Impact on Income</b>
Land Area	Positive (larger area yields higher output)
Selling Price	Fluctuating (significantly impacts income)
Production Costs	Negative (higher costs lead to lower profit margins)

The income of patchouli farmers in Taramanu Tua Village is influenced by three main factors: land area, selling price, and production costs. Land area has a positive correlation with income—larger landholdings allow for greater production of patchouli oil, thereby increasing earnings. Conversely, farmers with smaller plots may find it difficult to maximize output and may miss out on larger market opportunities.

The selling price of patchouli oil, which tends to fluctuate, also has a significant impact on income. Price instability, driven by supply and demand in the market, complicates farmers' financial planning. While high prices can yield substantial profits, price drops can drastically reduce income—even though production costs remain constant. This makes farmer income highly volatile.

In addition, high production costs negatively affect farmer income. Expenses such as fertilizers, labor, and plant maintenance reduce profit margins. Therefore, efficient cost management is crucial. Employing more efficient agricultural technologies and wisely utilizing available resources can help reduce production costs and improve profitability.

In summary, these three factors interact closely in determining farmer income. Proper management of land use, pricing strategies, and production efficiency plays a critical role in improving the economic well-being of patchouli farmers in the village.

## DISCUSSION

Taramanu Tua Village possesses significant potential in the agricultural sector, particularly in patchouli as a key commodity, known as one of the essential oil-producing plants widely used in the cosmetics and perfume industries. Its stable tropical climate, favorable temperatures, adequate rainfall, and fertile soil provide highly conducive natural conditions for patchouli cultivation. These natural advantages offer farmers in Taramanu Tua Village a competitive edge in developing patchouli farming as a primary source of household income. However, despite these favorable environmental conditions, the patchouli farming sector in the village still faces serious challenges, especially in terms of improving cultivation technology and adopting more professional farm management practices.

The findings of this study indicate that the majority of farmers in Taramanu Tua Village are within the productive age group of 31 to 40 years. This age group typically possesses a balance of experience and physical capability and is more receptive to modern agricultural technologies, which can significantly enhance the efficiency and productivity of farming activities. This suggests that the patchouli farming sector in the village is increasingly dominated by a younger generation that is more open to innovation and change. Although older farmers have more extensive experience, they often face physical limitations that may affect their productivity. Therefore, it is essential to provide intensive training and extension services to younger farmers to maximize their potential in managing agricultural enterprises more efficiently and technology-based.

In terms of farming experience, most farmers in Taramanu Tua Village have between 6 to 10 years of experience, indicating that they possess a solid foundation of knowledge in managing agricultural operations. This level of experience is crucial as it equips farmers to handle challenges in farming and develop practical skills necessary to deal with problems such as pest attacks or sudden climate changes. However, even those with over 10 years of experience must continue adapting to the rapid advancements in agricultural technology. Thus, continuous training and knowledge transfer related to modern farming technologies are vital to improving their efficiency and production outcomes. Over time, such extension efforts can strengthen farmers' capacity to manage land more effectively and respond to emerging issues.

Patchouli farmers' income in Taramanu Tua Village is significantly influenced by several factors, including crop yields, the selling price of patchouli oil, and production costs. According to the research findings, the average monthly income of farmers is approximately IDR 2,500,000, though earnings vary greatly among individuals. Price fluctuations in patchouli oil are one of the most critical challenges, as prices are heavily influenced by international market supply and demand. This uncertainty results in unstable income, making it difficult for farmers to plan their finances or invest in farm development. Additionally, high production costs—including fertilizer, labor, and plant maintenance—further reduce farmers' profit margins. Therefore, efforts to manage production costs more efficiently are essential to maximizing farmer profitability.

Apart from price volatility and production costs, land size also plays a vital role in determining income. Land area positively correlates with income, as larger plots enable greater yields. However, not all farmers in the village own large areas, and many operate on limited land. This necessitates optimal use of available resources—labor, inputs, and technology alike. Efficient land management becomes a key factor in achieving maximum productivity. The adoption of more efficient agricultural technologies, such as drip irrigation, precision fertilization systems, and data-based crop monitoring applications, can support farmers in optimizing their output.

The volatility of patchouli oil prices, which can rise or fall sharply, poses a major challenge to financial planning. As a result, farmers often have to accept much lower prices, despite the high costs they continue to incur. To address this, market and product diversification is a strategic necessity. By marketing value-added products derived from patchouli oil—such as soaps, perfumes, or other cosmetic products—

farmers can reduce their dependence on a single, price-sensitive market. Such diversification would help mitigate financial risks caused by unexpected global price fluctuations.

In conclusion, while Taramanu Tua Village has considerable potential in the patchouli farming sector, a number of challenges must be addressed for the sector to grow sustainably. Enhancing agricultural technology, providing training to younger farmers, and improving cost-efficiency in production are key steps toward boosting farmers' welfare and strengthening the local patchouli industry. By building farmers' capacity to manage their farms more effectively and adopt a technology-driven approach, agricultural productivity can be improved, income uncertainty reduced, and the overall village economy reinforced. A comprehensive and sustainable strategy will be crucial to ensuring the long-term success of patchouli farming in the area.

## CONCLUSION

This study reveals that the patchouli farming sector in Taramanu Tua Village holds great potential, supported by favorable tropical climatic conditions and fertile soil. However, farmers face several major challenges, including price volatility, limited land ownership, and high production costs, all of which directly impact yields and income levels.

To improve farmer welfare, several strategies may be implemented. These include market diversification to reduce reliance on unstable prices, as well as enhancing cost-efficiency through the use of modern agricultural technologies. The application of innovations such as drip irrigation and data-driven plant monitoring systems can significantly boost productivity and product quality.

In addition, easier and more affordable access to financing for farmers would facilitate investment in new technologies and farm expansion. With these efforts, it is expected that the patchouli farming sector in Taramanu Tua Village can grow sustainably, increase farmer incomes, and contribute to strengthening the local economy.

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