

FACTORS AFFECTING THE INCOME OF CLOVE FARMERS IN PONGGEOK VILLAGE, MANGGARAI REGENCY

Abstract

Cloves are among the crucial agricultural products for the people of Ponggeok Village. This study aims to analyze factors affecting cloves farmers income consist of land area, planting distance, harvest yield, selling price, government subsidy, education, and gender affect the income of clove farmers in Ponggeok Village, Manggarai Regency.

The main data for this study was gathered via multiple linear regression analysis a survey of research objects. This study found that the variables of planting distance, harvest yield, selling price have a positive and significant influence on the income of clove farmers in Ponggeok Village. Meanwhile, the variables of land area, government subsidy, education, and gender did not have a significant effect on the income of clove farmers in Ponggeok Village. The government needs to maintain the stability of the selling price of cloves by setting a minimum price. The government needs to provide training on the ideal planting distance of 5m x 5m to support plant growth. In addition, the government must provide fertilizer subsidies to protect farmers from the risk of crop failure, and increase production results. so that the harvest and income of farmers can increase.

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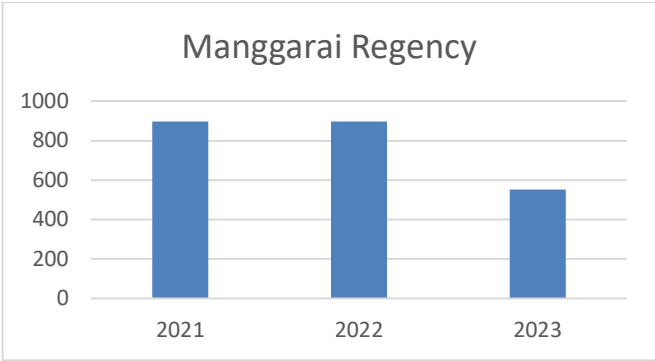
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1. Introduction

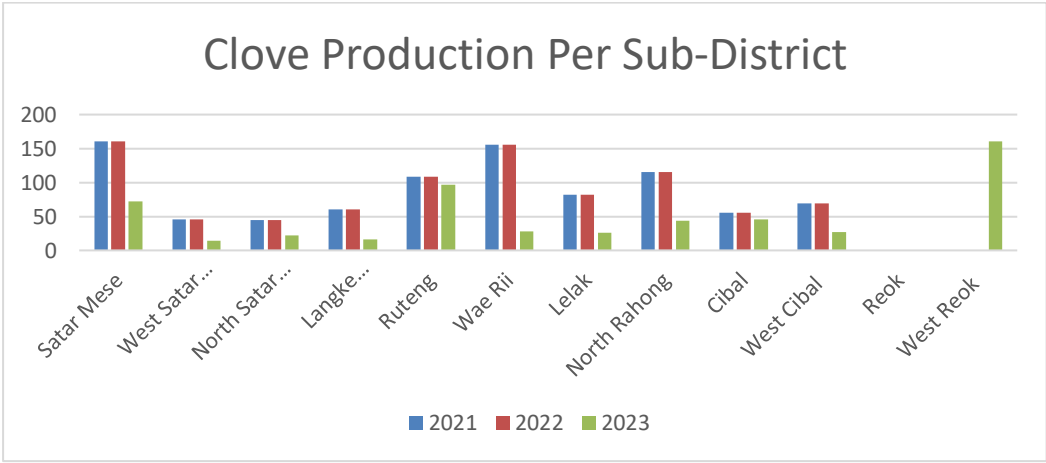
One of the top nine commodities in the plantation industry, cloves play a big part in both the local and national economies (Herdhiansyah, 2022) For many farmers, cloves are their main source of income due to their great economic worth. For the residents of East Nusa Tenggara Province's Manggarai Regency, who grow a lot of cloves, the following production:



Graph 1. Clove Production in Manggarai Regency

Source: Data processed 2024

In graph 1 above, clove production data in Manggarai Regency from 2021 to 2022 has a value that remains high. However, in 2023 it decreased. The decline was caused by climate change, pest or plant disease attacks, decreased soil fertility, and less than optimal plantation management (Government of Ponggeok Village, 2024).



Graph 2. Clove Production by Per Sub-District

Source: Data processed 2024

The largest production in graph 2 is in Satar Mese Sub-District, Manggarai Regency, East Nusa Tenggara Province from 2021 to 2022. However, it decreased in 2023. Therefore, Satar Mese sub-district was chosen because it has the largest production results compared to other sub-districts. More specifically, we chose Ponggeok village in Satar Mese sub-district, Manggarai Regency, East Nusa Tenggara.

Ponggeok Village, located in Satar Mese District, Manggarai Regency, East Nusa Tenggara Province, has fertile plantation land and high clove production. Based on data from (Government of Ponggeok Village, 2024), this village is one of the villages with the largest contribution to the plantation sector with a total production of 11,256 tons. In general, the condition of the Ponggeok Village area is in the form of hills filled with trees, with an area of 677 ha, of which 181.5 ha is used for plantations.

Ponggeok village which has a lot of clove plantation land, it can be a potential source of income for the community. Sultan (2019) said income from clove cultivation provides added value for farmers. This is because cloves are widely used in the cooking spice, cigarette, pharmaceutical, and cosmetic industries, thus increasing income and supporting village economic growth.

In the matter of cloves, there are many variables that have the potential to affect the income of clove farmers, including land area, planting distance, harvest yields, selling prices, government assistance, education, and gender. Each of these variables plays an important role in determining how much income farmers can generate. According to Farizi (2018) and Daniel (2004) the wider the rice fields owned by farmers, the more harvests can be produced and can further increase farmer income. However, several other studies have given different results, that the variable of the Land area has no discernible impact on farmer income (Anggarani, 2012; Diansya, 2020; Manua et al., 2018; Saragih & Panjaitan, 2020; Tangkulung et al., 2021; Yanutya, 2013). The ideal planting distance is to ensure that plants do not compete with other plants in taking water, nutrients, and sunlight, so that they have a balanced area for growth (Magfiroh et al., 2017) h . Plant density greatly affects growth, development, and harvest yields (Suhendrata, 2022)

The harvest is a measure that shows the amount of product obtained from farming in one area of land in one production cycle, which is measured in weight (mass) per unit area, such as kilograms per hectare (kg/ha) (Hernalius et al., 2018). The higher the volume of harvest obtained, the higher the amount of money that can be achieved through farmers, which ultimately contributes to increased income. However, there is a difference with the research from Litolily et al., (2021) which shows that high yields do not have a noteworthy impact on farmers' profits.

Selling price possesses a substantial impact on the earnings of farmers because it determines the amount of money received from their sales. According to Yanutya (2013) selling price is the exchange rate measured in money or other goods, and reflects the quality of goods or services. High selling prices have the potential to generate greater income from each kilogram of production sold. However, several other studies have provided different results, that selling prices don't significantly impact farmers' income (Belinska et al., 2023; Manua et al., 2018).

Subsidy, education, and gender are also important for farmer income. Support through subsidies, training, and access to agricultural technology can increase farmers' efficiency, productivity, and income (Siwu et al., 2019) Better-educated farmers are more likely to understand and apply new techniques, which increase productivity and efficiency (Hanushek & Woessmann, 2008). However, there are differences with other findings, which show that the education variable has no discernible impact on farmer income (Dudi Septiadi, 2022; Longkumer & Jamir, 2023; Moroki et al., 2018; Riyonoa & Juliansyaha, 2021; Syaribulan & Nurdin, 2015; Thamrin et al., 2012, argue that women often face various obstacles that limit their contribution and affect the income they earn in farming. However, there is confusion due to differences in research from Widayanti et al (2021) which shows that gender has no appreciable impact on farmer revenue. Where is data

Cloves are one of the important agricultural commodities for the people of Ponggeok Village. However, based on data from Government Ponggeok Village (2024), income from cloves tends to decrease in 2023. In the literature, the variables of land area (Anggarani, 2012; Diansya, 2020; Manua et al., 2018; Saragih & Panjaitan, 2020; Tangkulung et al., 2021; Yanutya, 2013), planting distance (Magfiroh et al., 2017; Suhendrata, 2022), harvest yield (Litiloly et al., 2021), selling price (Belinska et al., 2023; Manua et al., 2018), government assistance (Awar et al., 2019; Hamid, 2018; Kasmita et al., 2021; Parawangi, 2016; Sulastriani et al., 2023), education (Dudi Septiadi, 2022; Longkumer & Jamir, 2023; Moroki et al., 2018; Riyonoa & Juliansyaha, 2021; Syaribulan & Nurdin, 2015; Thamrin et al., 2012), and gender (Widayanti et al, 2021) can affect income from cloves. However, the results of other studies show that these factors do not affect farmer income. This raises doubts about whether these factors impact the revenue of farmers.

In this investigation, we want to analyze land area, planting distance, harvest yield, selling price, government assistance, education, and gender that have an impact on the earnings of clove farmers in Ponggeok Village, Satarmese District. So this study takes the title study of the variables influencing the income of clove farmers. Previous studies generally only focused on land area, harvest yields, and selling prices (Anggarani, 2012; Diansya, 2020; Manua et al., 2018; Saragih & Panjaitan, 2020; Tangkulung et al., 2021; Yanutya, 2013). In addition, the majority used qualitative (Parawangi, 2016; Syahroni et al., 2023; Nurmayasari et al., 2019; Reni et al., 2023) and quantitative descriptive approaches (Ramadhan et al., 2017; Manua et al., 2018; Reni et al., 2023; Syahroni et al., 2023; Ramlan et al., 2023). In terms of location, previous studies were mostly conducted in Sulawesi (Manua et al., 2018; Muhtadi, 2024; Moroki et al., 2018; Reni et al., 2023; Ramlan et al., 2023; Santiaseh et al., 2022; Tangkulung et al., 2021; Parawangi, 2016), while this

study was conducted in Ponggeok Village, Satarmese District, Manggarai Regency, East Nusa Tenggara. The sample used in previous studies usually numbered below 100 farmers (Anggarani, 2012; Septiadi et al., 2023; Reni et al., 2023; Syahroni et al., 2023; Septiadi et al., 2022; Manua et al., 2018; Moroki et al., 2018; Ramlan et al., 2023; Santiaseh et al., 2022; Yanutya, 2013; Nurmayasari et al., 2019), while this study involved 105 farmers, so the results were more representative. Another difference lies in the type of data, previous studies used a lot of secondary data (Agung et al., 2017; Hussen & Hussen, 2024; Syahroni et al., 2023; Nurmayasari et al., 2019), while this study uses primary data. From the explanation above, this study has many differences and gaps to be examined in more detail. So that in this study, an in-depth analysis of the factors that influence the income of clove farmers was carried out using primary data, multiple linear regression analysis, a census by taking all people, the location of the study in the East Nusa Tenggara area so that this study took the title factors affecting the income of clove farmers in Ponggeok Village, Manggarai Regency.

2. Literature Review

A. Land Area

Because it is commonly believed that the more land planted, the more production is created, land area plays a decisive role in the production of agricultural commodities (Hastuti & Rahim, 2007). An overview of the entire revenue collected by the business is given by the concept of income, which is determined by multiplying the price per unit by the total number of units sold (made). such that farmers' revenue increases with the amount of land planted obtained from sales.

This is located in line with the findings of the study from Khairati et al (2023), Moroki et al (2018), Ramlan et al (2023), Santiaseh et al (2022), Nugraha et al (2021), Arniati (2021), Muhtadi (2024), Rahayu (2020), Arinda & Yantu (2015), Damanik (2014), Wahed (2015), Puspita & Hardina (2019), Pirngadi et al (2023), Yulanda (2019) which shows that the variable of land area held by agriculturalists has a positive and substantial impact on rice growers' income.

B. Planting Distance

Planting distance arrangements are needed for land efficiency, reducing competition between plants, improving yield quality, and maximizing farming efforts (Wijaya, 2012) Based on the concept of production, the use of appropriate planting distances can increase the amount of production, therefore influencing the high earnings of farmers.

This aligns with the findings of the research that Suhendrata (2022) who in his research conducted an experiment by applying an introductory planting distance of 70 x 20 cm and 70 x 40 cm, successfully increasing the amount of production. and has an impact on increasing farmer income. Magfiroh et al (2017) The results of his experiment at a planting distance of 20 cm x 20 cm and 25 cm x 25 cm, also produced a greater amount of production, so that farmer income also increased.

C. Harvest Yield

Production results are the total goods produced by a business unit or company after using production factors. This output is obtained from the management of production inputs or facilities used in the business (Purwanti, 2014). A summary of the total revenue earned by the business is given by multiplying the price per unit by the total number of units sold (manufactured), which is how income is determined based on the idea of income. So that the higher the harvest, the higher the income of farmers obtained from sales.

Ramlan et al., (2023) found that the variable of output quantity possesses a favorable and significant impact on clove farmers' revenue in Larompong District, Rente Alang Village, Luwu Regency. Other studies by Septiadi et al., (2023), (Santiaseh et al., 2022), (Manua et al., 2018), (Salam & Yusria, 2023), (Septiadi et al., 2022), (Marpilina et al., 2017), (Wahed, 2015), (Diansya, 2020), (Riyonoa & Juliansyaha, 2021), (Umuroyana, 2019) also demonstrated that the total production variable has a major and favorable impact on farmers' revenue.

D. Selling Price

Selling price is an attempt to strike a balance between the need to get the most benefits from a wealthy background and the risk of decreasing value if the cost to customers is excessively high (Krismaji et al., 2011). According to the definition of profit, total income (produced) less total costs (incurred) equals profit, which gives the company's overall earnings. So that with the higher selling cost, the income acquired from the sale of output results will also be high, and has the potential to increase the profit of farmers' income.

This finding is in keeping with studies from (Daro et al., 2021) which proves that the selling price significantly and favorably affects the income of clove farmers in Selalejo Timur Village. The research of Wahed (2015), Rahayu (2020), Ramlan et al (2023), Muhtadi (2024), Tangkulung et al (2021), (Salam & Ode Yusria, 2023), Septiadi et al (2022), Yanutya (2013), Diansya (2020),

Septiadi et al (2023) also proved that selling price has a substantial and favorable relationship with the farmers' earnings.

E. Government Subsidy

The government is required to support farmers by providing production facilities, such as equipment, supplies, and supporting facilities to increase agricultural output (Tengah et al., 2022). In the concept of income, government assistance in the form of subsidies or other support can affect farmers' income by reducing production costs or increasing efficiency. This support can increase crop yields and reduce expenses, thereby increasing farmers' income.

The findings of Ramadhan et al (2017) show that government aid significantly and favorably affects the income of nutmeg farmers in South Aceh Regency. This is consistent with the results of Siwu et al (2019), Mahendra et al (2021), Emilianus (2021) which demonstrate that government assistance possesses a favorable and significant influence on earnings.

F. Education

Gardner (2011) Proposed a broader concept of education, which goes beyond the focus on verbal and mathematical intelligence. According to him, education should pay attention to various different intelligences and encourage the development of individual potential holistically. In production theory, the degree of learning of farmers can impact their ability to use more efficient and innovative cultivation techniques. Higher education is often associated with better knowledge of the latest technology, efficient farming methods, and better management. So that it can increase the productivity and efficiency of the production process and have an impact on increasing farmer income from sales. This is in line with research from Yanutya (2013), Muhtadi (2024), Hussen & Hussen (2024), Ashraf & Qasim (2019), Puspita & Hardina (2019), Wahyuni & Zulkifli (2019), which found that the education variable is positively related and has an important impact on farmers' revenue.

G. Gender

Gender focuses on the dynamics between males and women, especially those related to authority, positions, and control over limited resources, division of labor, and fulfillment of various needs. Imo (2009) In profit theory, gender can influence roles and decisions in production and marketing. Gender differences in roles can affect land management methods, use of assistance, and marketing strategies. So that it can affect the profits obtained by farmers. This finding is in

keeping with studies from Oyinbo (2014) which shows that gender has a noteworthy and favorable influence about farmers' earnings in the Giwa area, Kaduna State.

The study conducted by Nurmayasari et al (2019), Ratmayani et al (2018) , Tafsiri (2018) showing that equality of genders in accessing and controlling Men control the majority of resources and benefits. Herdayanti (2018) in the research analyzed using qualitative methods found that women have a dual role as clove farmers where women have a dominant factor in being the backbone of the family to help increase family income.

3. Research Methodology

This kind of study is correlational quantitative research. According to (Sugiyono, 2008), associative research is research that connects two or more variables. The study uses associative because it explains the influence of land area, planting distance, harvest yields, selling prices, government assistance, education, and gender on farmer income. This study was carried out in Ponggeok Village, Satarmese District, Manggarai Regency, East Nusa Tenggara. This investigation was carried out in April 2024-June 2024. The participants in this research were all clove farmers in Ponggeok Village, totaling 105 farmer heads of families determined by the census method of 105 farmer heads of families (Community and Village Empowerment Agency, 2024). Primary data were the type of data used in this investigation. This study used a survey approach to gather data on the research objects.

Multiple linear regression is the data analysis method employed in this investigation. Regression using multiple linear models is an analysis method accustomed to identify the influence of several separate elements on one dependent variable (Marpilina & Sudiana, 2017). This technique is needed to detect the connection between the independent variables and the variables that are dependent being tested. Meanwhile, data processing in this study uses Stata 17 Software.

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + e \quad (1)$$

Description:

Y = Income of clove farmers

X₁ = Land Area

X₂ = Planting Distance

X₃ = Harvest Results

X₄ = Selling Price

X₅ = Government Subsidy

X_6 = Education

X_7 = Gender

e = error term or residual, which is the variation between the expected and observed values of Y , indicating the influence of factors not included in the model

α = Intercept factor, which is the Y value when all independent variables are zero, representing the influence of other variables not included in the model.

b_1, b_2, b_3 = regression coefficient of each variable

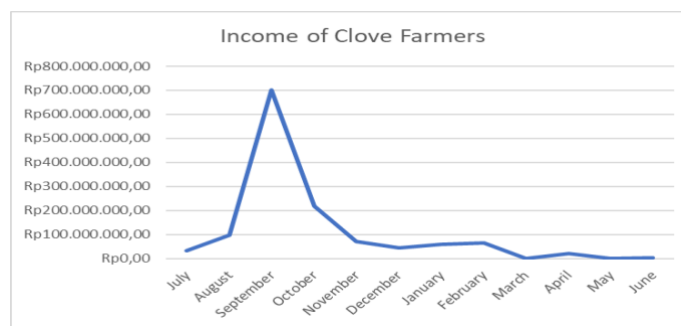
4. Result And Discussion

In this section, the data description, results, and discussion will be discussed as follows :

A. Data Description

a) Farmer Income

The income of clove farmers in Ponggeok Village is as follows:



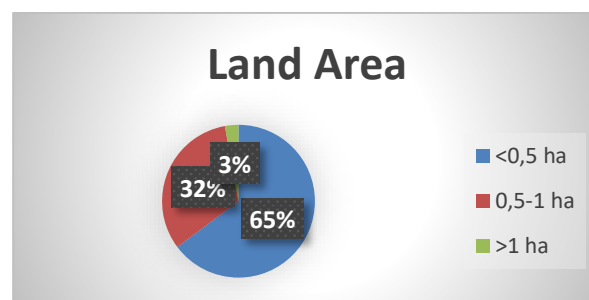
Graph 4. Income of Clove Farmers in Ponggeok Village

Source: Data processed 2024

Graph 4 indicates that September saw the biggest increase in clove farmers' revenue. This is because that month is the harvest season. While in the others, farmers' income is small, because it is not the harvest season.

b) Land Area (X_1)

The area of land used by clove farmers in Ponggeok Village is as follows:



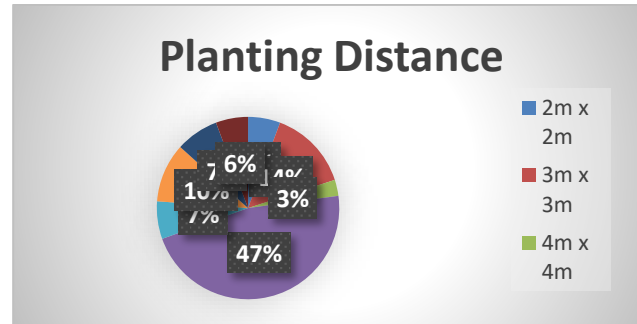
Graph 5. Land Area

Source: Data processed 2024

In graph 5, the majority of clove farmers have land <0.5 ha with a percentage of 65%. And the land area is rather moderate 0.5-1 ha by 32%.

c) Planting Distance (X_2)

The planting distance used by clove farmers in Ponggeok Village is as follows:



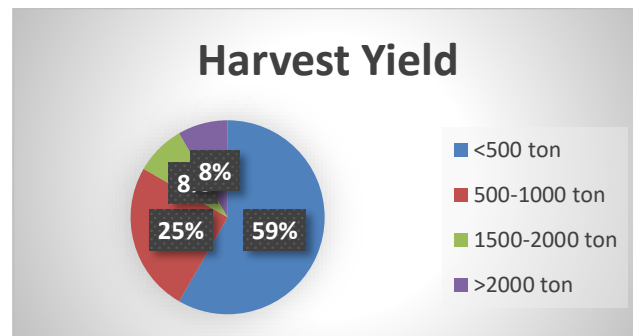
Graph 6. Clove Planting Distance

Source: Data processed 2024

Clove farmers mostly use a planting distance of 5m x 5m with a percentage of 47%.

d) Harvest Yield (X_3)

The clove harvest results in Ponggeok Village are as follows:



Graph 7. Clove Harvest Results

Source: Data processed 2024

The majority of clove farmers have a harvest of <500 tons, with a percentage of 59%.

e) Selling Price (X_4)

The selling price obtained by clove farmers in Ponggeok Village is as follows:



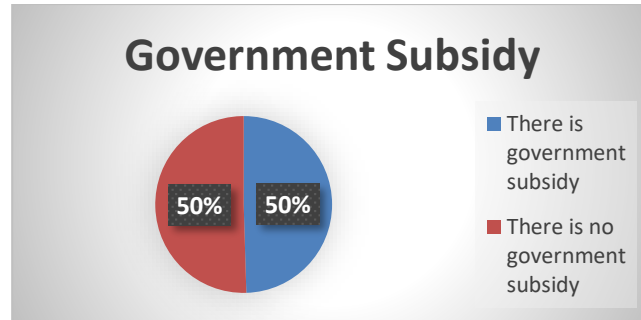
Graph 8. Clove Selling Price

Source: Data processed 2024

In graph 8, the estimated middle selling price of cloves is Rp120,000-Rp130,000, with a percentage of 58%.

f) Government Subsidy (X_5)

The percentage of whether or not there is government assistance received by clove farmers in Ponggeok Village is as follows:



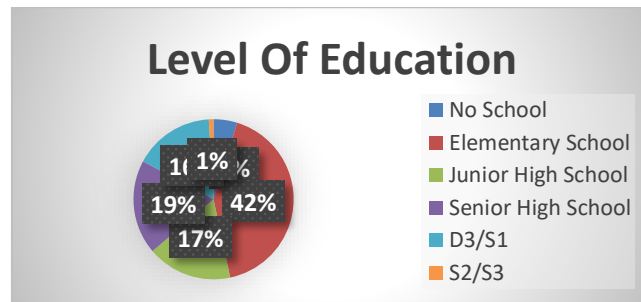
Graph 9. Government Assistance

Source: Data processed 2024

The community that receives government help and the community that does not receive assistance share the same percentage, or 50%, as shown in graph 9.

g) Education (X_6)

The percentage of education level of clove farmers in Ponggeok Village is as follows:



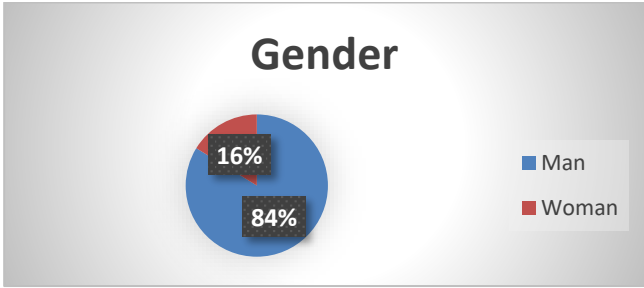
Graph 11. Education of Clove Farmers

Source: Data processed 2024

In graph 11, the majority of clove farmers' education is elementary school graduates, with a percentage of 42%.

h) Gender (X₇)

The percentage of gender in clove farmers in Ponggeok Village is as follows:



Graph 12. Gender of Clove Farmers

Source: Data processed 2024

In graph 12, the majority of clove farmers are male with a percentage of 84%.

B. Result

The test's outcomes in this investigation are shown within the following Table 1;

Tabel 5. Estimation Result

Variabel	Coefficient	Std. Error	t-Statistic	Prob.*
c	-1.7400000	5139111	-0.86	0.391
X ₁	- 1525401	1770617	4.05	0.000
X ₂	1183761	292206	23.63	0.000
X ₃	151286.6	6403.346	2.16	0.033
X ₄	73.80795	34.213	-0.33	0.744
X ₅	384947.1	1177674	1.96	0.053
X ₆	930111.6	474619.3	1.24	0.218
X ₇	1910003	1541437	-3.38	0.001

Source: Data processed 2024

Regression equation

$$Y = -1.7400000 - 1525401 (X_1) + 1183761 (X_2) + 151286.6 (X_3) + 73.80795 (X_4) - 384947.1 (X_5) + 930111.6 (X_6) + 1910003 (X_7)$$

With the following interpretation:

The significance value of the p-value for land area (X₁) is 0.391>0.05. Thus, it may be said that land area (X₁) has no discernible impact on clove growers' revenue (Y), as H₀ is accepted and H_a is denied.

The significance value of the p-value for planting distance (X₂) is 0.000 <0.05. Consequently, it may be said that planting distance Given that H_a is accepted and H₀ is denied, it

may be said that planting distance (X_2) significantly affects clove growers' revenue (Y). 1183761 is the coefficient value.

Harvest yield (X_3) possesses a significance value of $0.000 > 0.05$ for the p-value. Given that H_a is accepted and H_0 is denied, it can be said that harvest yield (X_3) significantly influences clove producers' revenue (Y). using 151286.6 as the coefficient value.

Selling Price (X_4) has a p-value of $0.033 < 0.05$, which is a significant value. Given that H_a is accepted and H_0 is refused, it can be said that the selling price (X_4) significantly affects the revenue (Y) of clove growers. 73.80795 is the coefficient value.

Government assistance (X_5) has a p-value of $0.744 > 0.05$, which is a significant value. Since H_0 is approved and H_a is refused, it can be said that the income of clove producers (Y) is not significantly impacted by government support (X_5).

Education (X_6) Possessing a p-value of $0.053 > 0.05$ indicates significance. Thus, it may be said that education (X_6) has no discernible impact on clove growers' income (Y), as H_0 is accepted and H_a is denied.

Gender (X_7) has a p-value of $0.218 > 0.05$, which is a significant value. Given that H_a is rejected and H_0 is accepted, it can be said that gender (X_7) has no discernible impact on clove producers' (Y) revenue.

The significance level of the p-value, as determined by the simultaneous test (F test), is $0.0000 < 0.05$. This indicates that H_a is accepted and H_0 is rejected, demonstrating that the individual factors taken together have a substantial effect on clove producers' (Y) income. resulting in an R-squared score of 0.8655 (86.55%). This shows that land area (X_1), planting distance (X_2), harvest yield (X_3), selling price (X_4), government support (X_5), education (X_6), and gender (X_7) account for 86.55 percent of the difference in clove income (Y). Variables not in the model account for the remaining percentage.

C. Discussion

The analysis's findings indicate that concurrently and partly, the variables of land area (X_1), planting distance (X_2), harvest yield (X_3), selling price (X_4), government subsidy (X_5), education (X_6), and gender (X_7) have an influence on the earnings of the Manggarai Regency's clove producers in Ponggeok Village, Satar Mese District.

Land area is a determining factor in the production of agricultural commodities. The wider the land planted, the greater the amount produced (Hastuti, et al. 2007). Land area related to income. The price per unit multiplied by the total number of units sold (manufactured) is how

revenue is computed, and the result gives an overview of the overall amount of money the business has made. So that the wider the land planted, the higher the income of farmers obtained from sales. The hypothesis test's findings demonstrate that land area does not possess a noteworthy impact on the incomes of growers of clove. A t-count value of 0.391, which is greater than 0.05, indicates that the land area utilized does not enhance the income of clove farmers in Ponggeok Village, located in the Satar Mese District of Manggarai Regency. This finding is in line with (Anggarani, 2012; Diansya, 2020; Manua et al., 2018; Saragih & Panjaitan, 2020; Tangkulung et al., 2021; Yanutya, 2013).

Planting distance is needed for land efficiency, reducing competition between plants, improving yield quality, and maximizing farming efforts (Wijaya, 2012). The use of appropriate planting distance can increase the volume of output, thus affecting the high farmers' earnings. The result is that planting distance has a significant effect on clove farmers. Using a t-count value of $0.000 < 0.05$, indicates that the planting spacing employed plays a role in enhancing the income of clove farmers in Ponggeok Village, Satar Mese District, Manggarai Regency. This aligns with the results of the research from (Magfiroh et al., 2017; Suhendrata, 2022).

Production yield is the total goods produced by a business unit or company after using production factors. This output is obtained from the management of production inputs or facilities used in the business (Purwanti, 2014). An overview of the profits made by the business is determined by deducting total income (created) from total costs incurred. So that the higher the harvest, the higher the income of farmers obtained from sales. The results of the hypothesis test suggest that the harvesting process significantly affects the earnings of clove farmers. With a t-count value of $0.000 < 0.05$, this indicates that the results of the harvest positively influence the income of clove farmers in Ponggeok Village, located in the Satar Mese District, Manggarai Regency. This is consistent with the conclusions drawn from the research. (Diansya, 2020; Manua et al., 2018; Marpilina & Sudiana, 2017; Ramlan et al., 2023; Riyonoa & Juliansyaha, 2021; Salam & Ode Yusria, 2023; Santiaseh et al., 2022; Septiadi et al., 2022, 2023; Usiaoyana, 2019; Wahed, 2015).

Selling price is an endeavor to strike a balance between the aim to attain maximum benefits from a wealthy background and the risk of decreasing value if customers are being charged an excessive amount (Krismaji et al., 2011). Reducing overall income (earned) by total costs incurred yields profit. So with the increasing selling cost, the income acquired from the sale of output results will also be high, and has the potential to increase the profit of farmers' income. The results of the hypothesis test indicate that the selling price has a significant effect on the income of clove

farmers. With a t-count value of $0.033 < 0.05$, it suggests that the selling price plays a role in boosting the revenue of clove farmers in Ponggeok Village, Satar Mese District, Manggarai Regency. These findings align with the outcomes of the research conducted. (Daro et al., 2021; Diansya, 2020; Muhtadi, 2024; Rahayu, 2020; Ramlan et al., 2023; Salam & Ode Yusria, 2023; Septiadi et al., 2022, 2023; Tangkulung et al., 2021; Wahed, 2015; Yanutya, 2013).

The government is required to support farmers by providing production facilities, such as equipment, supplies, and supporting facilities to increase agricultural output (Tengah et al., 2022). In the concept of income, government assistance in the form of subsidies or other support can affect farmers' income by reducing production costs or increasing efficiency. This support can increase crop yields and reduce expenses, thereby increasing farmers' income. The hypothesis test's findings demonstrate that government assistance does not significantly impact the farmers' income from growing cloves. With a t-count value of $0.744 > 0.05$, it indicates that the government aid provided does not play a role in enhancing the income of clove farmers in Ponggeok Village, Satar Mese District, Manggarai Regency. This aligns with the results of the research conducted. (Awar et al., 2019; Hamid, 2018; Kasmita et al., 2021; Parawangi, 2016; Sulastriani et al., 2023).

Gardner (2011) Proposed a broader concept of education, which goes beyond the focus on verbal and mathematical intelligence. According to him, education should pay attention to various different intelligences and encourage the development of individual potential holistically. In production theory, the degree of learning of farmers can impact their the capacity to use more efficient and innovative cultivation techniques. Higher education is often associated with better knowledge of the latest technology, efficient farming methods, and better management. So that it might boost the production process's efficiency and productivity and affect the growth of farmers' sales revenue. The results of the hypothesis test showed that the income of clove growers was not significantly impacted by the degree of schooling. using a $0.053 > 0.05$ t-count value. This indicates that the revenue of clove producers in Ponggeok Village, Satar Mese District, Manggarai Regency, is not influenced by their educational attainment. This is consistent with study findings (Dudi Septiadi, 2022; Longkumer & Jamir, 2023; Moroki et al., 2018; Riyonoa & Juliansyaha, 2021; Syaribulan & Nurdin, 2015; Thamrin et al., 2012).

Gender emphasizes the bond between males and females, especially in relation duties, authority, and command over limited assets, division of labor, and fulfillment of various needs (Imo, 2009). In production theory, gender can influence roles and decisions in production and marketing. Gender differences in roles can influence land management methods, use of assistance, and marketing strategies. In order for it to can impact the earnings obtained by farmers. The

hypothesis test's findings indicate that gender has no discernible effect on clove growers' incomes. use the t-count value $0.218 > 0.05$. This indicates that the income of clove producers in Ponggeok Village, Satar Mese District, Manggarai Regency, is not influenced by their gender. This aligns with the findings of the study (Nurmayasari et al., 2019; Widayanti et al., 2021).

5. Conclusions And Policy Implication

Conclusions

The study's findings allow for the conclusion that the variables of planting distance (X_2), harvest yield (X_3), and selling price (X_4) have a positive and significant effect on Ponggeok Village, Satar Mese District, Manggarai Regency's clove producers' income. Meanwhile, in Ponggeok Village, Satar Mese District, Manggarai Regency, the factors of land area (X_1), government subsidy (X_5), education (X_6), and gender (X_7) do not significantly affect the income of clove growers. It is evident from the study's findings that the selling price of cloves will determine how much money farmers make. Farmers must control supply and demand by keeping the crop during the bountiful season and selling it when it is most profitable in order to maintain the selling price. Furthermore, the amount of product generated will depend on the land area, thus farmers must focus on proper planting.

Policy Implication

The government needs to ensure the stability of the selling price of cloves, because its benefits have not been fully felt by the community. Therefore, the role of the government needs to be strengthened. One way is to provide training to farmers on efficient farming techniques, such as socialization on the optimal planting distance of 5m x 5m by ensuring even distribution of light, water, and nutrients and planting strategies that can increase plant growth. In addition, the government also needs to increase market access through digitalization and exports, as well as provide subsidies or agricultural insurance to protect farmers from the risk of crop failure. The hope is that the harvest will increase and farmers' income will improve.

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