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Factors Affecting The Income Of Corn Farmers In Waihatu Village, West Kairatu District, West Part Of Seram District

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Abstract

This study aims to determine: (1) Corn farming income in Waihatu Village, West Kairatu District, West Seram Bagian Regency (2) Factors that affect the income of corn farmers in Waihatu Village, West Kairatu District, West Seram Bagian Regency. The research method used quantitative method. The sample location was determined deliberately, namely Waihatu Village in West Kairatu District. Sampling was taken 20% of the population of 210 corn farmers, then the sample used was 41 corn farmers. The first research objective, analyzed by the income formula and the second objective of the study using multiple linear regression analysis. The results showed that there are four factors that affect the income of corn farmers in Waihatu Village, West Kairatu District, West Seram based on four factors namely land area, production, production costs and selling prices. Based on the results of the simultaneous test / (F test) that all these factors together affect the income. And based on the partial test (t test) on three factors that have a positive and significant effect on income, namely production, production costs, selling prices and one factor that has a negative and significant effect on income, namely land area. Because in one planting area corn farmers only use most of the seeds and the other half of the land is used for other crops.

Keywords: Meize, Fermers, Income

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INTRODUCTION

Indonesia is known as an agricultural country where the majority of the population makes their living as farmers. So the Indonesian government always tries to implement agriculture through sustainable development programs. One sector that plays an important role in the Indonesian economy is agriculture (Hastuty, 2018).

Corn is developed on a larger production scale with higher production because it has the potential to increase farmers' income and the regional economy. Corn production in Indonesia has seen an increase in corn production in the last three years, as seen from 2020 to 2021, corn productivity increased by 4.1%, and in 2022 corn productivity increased by 3.7%. This shows that corn productivity in Indonesia continues to increase every year.

Almost all parts of the sweet corn plant have economic value. Some parts of the plant that can be used include young stems and leaves for animal feed, old stems and leaves (after harvest) for green manure/compost, dry stems and leaves as firewood, young corn fruit for vegetables, cakes, bakwan and various kinds. other processed foods.

Corn in Maluku is cultivated quite a lot so that corn production always increases every year, namely in 2022 corn production will reach 15,689.00 tons from a harvested area of 2,698.04 hectares. Even though the harvest area is larger than the land area, this does not affect production results due to maximum care and the use of superior seeds. West Seram Regency is a district in Maluku Province, West Seram Regency is a corn production center which is quite prospective because some of the residents there make their living as farmers, one of the horticulture crops that is widely cultivated, namely corn. According to data on secondary crop production in West Seram Regency, corn production increased by 10.3% compared to rice which was only 6.8%. Corn is starting to become a favorite because the production costs are smaller than rice but the income remains balanced.

The sub-district that does a lot of corn farming is West Kairatu Sub-district in Waihatu Village. Waihatu Village based on production data according to BPS in 2022, that Waihatu Village produces 1,230 tons of corn from a harvest area of 60 hectares. This means that the average corn production in Waihatu Village is 3.67 tons per hectare. Waihatu Village itself, some of the farmers are corn farmers considering that corn can be planted on dry land so that the corn can grow and provide good economic effects for corn farmers in Waihatu Village. According to (Hamyana, 2022), stated that there are several obstacles that Corn farmers face include the small area of land cultivated, small-scale farming which is also accompanied by imperfect markets such as high transaction costs and unclear market information. This is how corn farmers in Waihatu Village feel. Therefore, it is necessary to increase productivity while increasing the income of corn farmers in Waihatu Village.

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The level of income from corn farming is influenced by several factors, the factors in question are land area, production costs, production and selling prices. However, the dominant factors that influence corn farming income in Waihatu Village are not yet known with certainty. Based on this phenomenon, researchers are interested in researching "Factors that Influence the Income of Corn Farmers (Zea Mays L) in Waihatu, West Kairatu District, West Seram."

Formulation of the problem

1. How much do corn farmers in Waihatu Village earn?
2. Identifying factors that influence the income of corn farmers in Waihatu Village.

Research purposes

1. To find out how much corn farmers in Waihatu Village earn.
2. To find out what factors influence the income of corn farmers in Waihatu Village.

LITERATURE REVIEW

Definition of Corn Plants (Zea Mays L.)

The corn plant (Zea mays L.) is a grass plant and has a single seed (monocot). Corn is a strong, slightly clumped grass plant with rough stems and a height ranging from 0.6 to 3 m. Corn plants are a seasonal type of plant with a lifespan of ± 3 months.

I.

Factors Affecting Income

1. Land area as a production factor in agriculture, especially in Indonesia, the land production factor has the most important population. Maximum utilization of production factors can enable farmers to achieve maximum levels of income on each area of land used for farming (Dewi et al, 2012).
2. Production is the relationship between production factors called inputs and production results called output (Sudarsono, 1984).
3. Production costs are costs that consist of three elements, namely raw material costs.
4. The selling price is the amount of money that the buyer is willing to pay and the seller is willing to accept (Gregory Lewis, 1993).

RESEARCH METHODS

`This research was carried out in Waihatu Village, West Kairatu District, West Seram Regency, for approximately one month from the seventh of November to the seventh of

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December. This location was chosen deliberately, with the consideration that in Waihatu Village there is a fairly large population of corn farmers.

The population in this research, in this case the farmer group in Waihatu Village, is 500 farmers, but the corn farmers themselves are 210 farmers. According to Arikunto 2917, if there are less than 100 subjects then the entire population will be used as a sample. However, if it is more than 100 then take 10-15% or 15-25%. Thus, 20% of the samples were obtained from 42 corn farmers.

According to Seokartawi 2006, revenue can be formulated as follows:

$$TR = Q \cdot P$$

Description:
TR = Total receipts (total revenue)
Q = Production Price
P= Production Amount

Farming income is the difference between revenue and all costs in mathematical form, the definition of income can be written as follows:

$$Pd = TR - TC$$

Information:
Pd = Farming income
TR = Total revenue
TC = Total expenditure

The second analysis was examined using OLS-based multiple regression**(Ordinary Least Squares),**This analysis is used to determine the factors that influence farming income which can be mathematically formulated using the following statistical approach:

$$Y = F(X1, X2, X3, X4, \ldots.)$$

$$Y = \beta o\ X1\ \beta 1\ X2\ \beta 2\ X3\ \beta 3\ X4\ \beta 4$$

Then the equation above is linearized using the natural logarithm (ln) to form the following equation:

$$\ln Y = \beta o + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4$$

Information:
Y = Corn Farming Income (Rp/Kg)
βo = Constant
X1 = Land area (Ha)
X2 = Production (Rp/Kg)
X3 = Production Cost (Rp/Kg)
X4 = Selling price (Rp/Kg)

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B1, β2, β3, β4 = Regression direction coefficients

RESULTS AND DISCUSSION

The characteristics of the respondents studied include a) Age of farmers, corn farmers in Waihatu Village are generally at the lowest age of 20-30 years with a percentage value of 7.14%. This is because the age of the farmers is still young and has just started farming corn, and the most productive age group is 41-50 years old with a percentage value of 42.86%. b) The education level of farmers in Waihatu Village is generally elementary school with a percentage value of 47.62% from 42 respondents. There are three educational facilities in Waihatu Village consisting of kindergarten, elementary school and high school. However, farmers in Waihatu Village started farming when they were small by following their parents, so they no longer continue their education to a higher level. c) The number of family members, farmers in Waihatu Village is the highest with a percentage value of 47.61%, because there are several family members who have just married and the rest have migrated out of town. d) Land ownership, based on data collection on own land ownership status with a percentage value of 97.6% from 42 respondents.

The factors that influence the income level of the corn farmers studied are. Land area, production, production costs and selling prices. Which is described as follows:

a) Land area (X1)

Most of the land in Waihatu Village is also owned by the community itself and there is also rented land that is managed by them. Land area is one of the factors that influences corn farming income. Land area has an impact on more productive farming processing and can influence the size of farmers' income from corn rice farmers. Then, to find out the land area of corn farmers in Waihatu Village, you can see the results of data collection in table 1.

Table 1. Characteristics of respondents based on land area.

Land Area (Hectares)	N (Person)	Percentage(%)
0.5	15	35.71
0.75	12	28.58
1	15	35.71
Totally	42	100%

Source: Processed Primary Data, 2023

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Based on the table above, it shows that the largest land area used for corn farming is 0.5 H, with a percentage value of 35.71%. According to the respondents, the land is sufficient for planting corn because the time required to clear the land is quicker and can be done by yourself.

b) Production (X2)

Production according to Ummi Duwila (2015), every production process to produce goods and services is called a production process because the production process has a technical basis which in economic theory is called the production function. It can be said that production is the sum of production results or quantity in a certain time. For this reason, the amount of corn production based on respondents can be seen in table 2.

Table 2. Characteristics of respondents based on production

Production (Kg)	N (Person)	Percentage(%)
1000-2000	24	57.14
3000-4000	11	26.19
5000-6000	7	16, 67
Totally	42	100%

Source: Processed Primary Data, 2023

Based on the table above, it can be seen that corn production in Waihatu Village is sold in the form of per sack with the weight of corn per sack being approximately 60 (kg) at a price of Rp. 150,000-Rp. 250,000. and per stalk, namely Rp. 2,500. Prices can go up and down depending on the season. If it is durian fruit season, the price of corn will decrease to the price per sack, namely Rp. 100,000.

c) Production costs (X3)

Production costs are costs incurred to process raw materials into finished goods. According to Mulyadi (2015), production costs are costs incurred in processing materials directly into finished goods, for example fertilizer costs, seed costs and selling prices which can be seen in table form below based on respondent data taken in Waihatu Village as follows.

Fertilizer Costs

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Fertilizer costs incurred by farmers quite influence the income of corn farmers, the costs incurred are quite varied as can be seen in table 3.

Table 3. Fertilizer Cost Levels in Waihatu Village per planting season.

Fertilizer Cost (Rp)	N (Person)	Percentage(%)
100,000 – 200,000	18	42.8
300,000 – 400,000	15	35.7
500,000 – 600,000	9	21.5
Totally	42	100%

Source: Processed Primary Data, 2023

From the table above, it can be seen that the percentage of fertilizer costs incurred by corn farmers is IDR. 100,000 – 200,000 per planting season, quite a lot due to small land use, where the percentage is 42.8% compared to others. The fertilizer used by each respondent was different, namely urea (Rp. 150,000), MPK (Rp. 750,000) and phonska (Rp. 175,000). each is used in 2 seasons but depends on the area of land and number of plantings. This is adjusted to the area of land planted with corn seeds.

Seed Costs

Seed expenditure of course also affects the income of corn farmers, the higher the input price, the lower the farming income. We can see the costs incurred by corn farmers in table 4.

Table 4. Cost Levels for Corn Farmers' Seedlings in Waihatu Village.

Seed Cost (Rp)	N (Person)	Percentage(%)
100,000 – 200,000	25	59.5
300,000 – 400,000	3	7.14
500,000 – 600,000	6	14.28
700,000 – 1,000,000	8	18.9
Totally	42	100%

Source: Processed Primary Data, 2023

Based on the table above, the price of corn seeds per pack is Rp. 130,000, but if the subsidized price is Rp. 115,000. It can be seen that respondents in Waihatu Village used the highest seed costs at Rp. 100,000-200,000 with a percentage of 59.5%. Not all farmers use one packet of seeds, but some farmers use half a packet of corn seeds because in one

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packet there is more than one production capacity, adjusted to the area of land or the farmer's capabilities.

Total manpower

To find out the number of workers in Waihatu Village, see table 5.

Table 5. Number of workers in Waihatu Village per planting season.

Labor	People (N)	Percentage (%)
1-2	27	64.3
3-4	15	35.7
Totally	42	100

Source: Processed Primary Data, 2023

Based on the table above, it can be seen that Waihatu Village, West Kairatu District, uses labor according to the needs of farmers, the largest use of labor with a percentage value of 64.3%. Labor is used during the planting and harvesting process to care for the corn itself, usually also done by the farmers themselves. However, there is also labor used for the maintenance process. The workers taken do not come from their own families but come from outside the village and the wages given vary. Because according to the farmers, many from outside villages are asking for work from corn farmers in Waihatu Village.

Selling price (X4)

The price of output (corn) produced in corn farming is one factor in the size of the income earned by farmers. To get an idea of the output prices used by corn farmers in Waihatu Village, you can see table 6.

Table 6. Selling price levels in Waihatu Village per planting season.

Selling price (Rp)	N (Person)	Percentage(%)
150,000	25	59.5
170,000	10	23, 8
200,000	7	16, 7
Totally	42	100%

Source: Processed Primary Data, 2023

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From the explanation above, it can be seen that the average price of corn sold is Rp. 150,000 for approximately 60 kg with a total percentage of 59.5%. However, everything will again depend on the season, the price of corn is Rp. 200,000, approximately 60 Kg because farmers do not go through middleman collectors and are brought directly to the city. Of course there will be price changes, so the lower the selling price, the lower the income of corn farmers in the village will be. Waihatu.

Revenue (Y)

Income is the amount of goods and services that meet the community's level of living, where the income the community has can meet their needs, and the average income owned by each person is also called per capita income and is a benchmark for economic progress or development. The following respondent data based on income earned during the harvest season can be seen in table 7.

Table 7. Income distribution based on corn farmer questionnaires in Waihatu Village in 2023.

Income (Rp)	N (Person)	Percentage(%)
5,000,000 – 10,000,000	34	80.9
11,000,000 – 20,000,000	7	16.6
21,000,000>	1	2.5
Totally	42	100%

Source: Processed Primary Data, 2023

Based on the table above, it shows that the distribution of respondents' income obtained by corn farmers is Rp. 5,000,000 – 10,000,000 with a percentage value of 80.9% and the largest income of approximately Rp. 21,0000,000, with a percentage value of 2.5%. This is adjusted to the number of seeds planted by corn farmers.

Multiple Linear Regression Analysis

This analysis is used to determine the magnitude of the influence of the variables Land Area (X1), Production (X2), Production Costs (X3), Selling Prices (X4), on the income of corn farmers (Y) in Waihatu Village. This analytical tool is used using SPSS 25. Based on calculations, the results of multiple linear regression analysis are obtained in table 8.

Table 8. T test

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Variable	Regression Coefficients	t-count	Sig-t
Constant	36126.457	5,604	,000
LnX1	-88,417	-.797	,431
LnX2	937,005	7,566	,000
LnX3	408,070	5,861	,000
LnX4	238,084	3,680	,000
R Square: .737 F-Count: 25,174		T-Table: 2.024 F-Table: 2.62	

Based on the results of the regression analysis above, the functional relationship can be interpreted as follows:

Ln Y = 36126.457 + (-88.417) + 937.005 + 408.070 + 238.084

1. Constant =36126,457, if the Land Area (X1), Production (X2), Production Costs (X3), Selling Price (X4) are equal to zero, then the income value will be IDR. 36126.457.
2. Land Area regression coefficient (X_1) = (-88,417), meaning that if the land area (X_1) increases by 1 percent, while other variables are constant, it will cause a decrease in corn farmers' income by Rp. -88,417.
3. Production regression coefficient (X_2) =937,005, meaning that if production (X_2) increases by 1 percent, while other variables are constant, it will cause an increase in corn farmers' income of IDR. 937,005.
4. Production Cost regression coefficient (X_3) =408,070, meaning that if production costs (X_3) increase by 1 percent, while other variables are constant, it will cause an increase in corn farmers' income of Rp. 408,070.
5. Regression coefficientSelling price (X_4) = 238,084, meaning that if the selling price (X_4) increases by 1 percent, while other variables are constant, it will cause an increase in corn farmers' income by Rp. 238,084.

a) Land Area (X1)

Based on the research results in the table, it shows that the regression coefficient value for the Land Area variable is (-88.417) and the calculated t value is greater than the t table value (2.797 > 2.62) which means that the temporary assumption or initial hypothesis

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is not accepted. Because there is one variable that has no influence on revenue performance. So it can be explained that the Land Area variable does not have a negative influence on Income. This means that if the land area increases by 1 percent, while other variables are constant, it will cause an increase in income of 88,417. If there is a decrease in income, the land area will automatically not affect the amount of income

This fact is in line with the opinion of Simanjuntak (2020) that increasing the land area of corn farming in Nagori Bayu Bagasan Village by one unit (1 Ha) will reduce income by -2,236,166,986 assuming other factors are constant. This means that land area does not affect income.

a) Production (X2)

Based on the research results in the table, it shows that the Production regression coefficient value is 937,005 and the calculated t value is greater than 48 t table values (7,566 > 2.62), which means that the temporary assumption or initial hypothesis is accepted. So it can be explained that the Production variable has a positive and significant effect on Revenue performance. This means that production has increased by Rp. 1, while other variables are constant, it will cause an increase in income of Rp. 937,005.

This fact is in line with the opinion of Azzam (2023), where production variables have a significant effect on corn farming income in Senepo Village. The production variable shows that every increase in Rp. 1, then the value of income obtained from corn farming will increase by IDR. 2711,498.

b) Production Costs (X3)

Based on the research results in the table, it shows that the Production Cost regression coefficient value is 408,070 and the calculated t value is greater than 48 t table values (5,861 > 2.62) which means that the temporary guess or initial hypothesis is accepted. So it can be explained that the Production Cost variable has a positive and significant effect on Revenue performance. This means that production costs have increased by IDR. 1, while other variables are constant, it will cause an increase in income of Rp. 408,070.

This fact is in line with the opinion of Hafiz (2022) that the influence of production costs on PT Minang Sukses Sejahtera's income shows that the production cost variable has a positive relationship to income. It can be seen that the probability of the production cost variable is 0.022, the alpha value (< 0.05) and the value of the production cost variable coefficient is 0.1987. This means that if production costs increase by one unit, then income at PT Minang Sukses Sejahtera will increase or increase by 0.1987.

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c) Selling Price (X4)

Based on the research results in the table, it shows that the Sales Price regression coefficient value is 238,084 and the calculated t value is greater than 48 t table values (3,680 > 2.62), which means that the temporary assumption or initial hypothesis is accepted. So it can be explained that the Selling Price variable has a positive and significant effect on Revenue performance. This means that the selling price has increased by IDR. 1,, while other variables are constant, it will cause an increase in income of Rp. 238,084.

This fact is in line with the opinion of Susanti (2016) that output prices have a significant effect on corn farming income in Sidera Village, where t = 3.436 with a significant value of 0.002 < 0.01 at the 1% level of one-way test. The regression coefficient of 75,679 means that for every increase of IDR 1, the income of sweet corn farming farmers in Sidera Village, Sigi Biromaru District, Sigi Regency will increase by IDR 75,679.

CONCLUSIONS

Based on the results and discussion, the conclusion is that the factors that influence the income of corn farmers in Waihatu Village, West Kairatu District, West Seram are based on 4 criteria, 4 factors which include land area, production, production costs and selling prices. Based on the results of the simultaneous test / (f test) it is clear that all these variables together have an influence on income. And based on a partial test (t test) on 3 variables that have a positive and significant effect on income, namely production, production costs, selling prices and 1 variable that has a negative and significant effect on income, namely land area. Because farmers in Waihatu Village are more dominant in the use of seeds, so even though they have a large area of land, the use of seeds that are few or not superior will affect production levels so that income will also decrease.

REFERENCES

Arikunto, Suharsimi. 2017. Research Procedures for Practical Research. Publisher: Rineka Cipta, Jakarta.

Azzam, Abdurrahman, And Rena Yunita Rahman. "Factors That Influence Corn Farmers' Income in the Pt Pupuk Kaltim Prosperity Program Partnership in Slahung District, Ponorogo Regency." (2023).

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Dewi, IGAC, IKSuamba, and IGAA Ambarawati, 2012. Analysis of the Efficiency of Rice Farming (Case Study in Subak Pacung Babakan, Mengwi District, Badung Regency). Journal of Agribusiness and Agrotourism.

Lewis. Gregorv. Pricing for Profit. Translated by Julius A. Mulyadi. Jakarta : FT. Gramedia Pustaka Utama. 1994.

Hamyana, Y. (2022). The impact of the partnership program on the feasibility of farming and income of corn farmers in Sumberpucung District, East Java.

Hastuty, Sri. "Identification of factors driving agricultural land conversion." Proceedings.

Soekartawi, Soeharjo A. Dilon JL and JBHardaker, Agricultural Science and Research for the Development of Small Farmers, (Jakarta: University of Indonesia, 1986).

Simanjuntak, Romauli, And Amrizal Amrizal. "Feasibility Analysis and Factors Affecting Sweet Corn Farming Production: (Case Study in Nagori Negeri Malela, Gunung Malela District)." Agrilink Journal.

Sudarsono. 1984. Introduction to Microeconomics. Modules 1-5, Jakarta: Open University. Sugiyono. (2016). Quantitative, Qualitative and R&D research methods. Bandung: Cv.

Susanti, AL (2016). The Influence of Operational Income, Non-Operational Income, Operational Costs, and Non-Operational Costs on Profit at Pt. Bank Bca Syariah. Bank Bca. Tulungagung

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