ISSN:2656-4270 (Online) 1410-4466 (Print)
Accredited by Ministry of Education, Culture, Research, and Technology with the ranking of Sinta (S3) SK NO.164/E/KPT/2021, 27th December 2021

Buletin Penelitian Sosial Ekonomi Pertanian Fakultas Pertanian Universitas Haluoleo
2024:26(1):71-80
https://ejournal.agribisnis.uho.ac.id/index.php/sosek
doi: https://doi.org/10.37149/bpsosek.v26i1.1256

ANALYSIS OF FACTORS AFFECTING THE INCOME OF CELERY (*Apium graveolens I*) PRODUCERS IN KERINJING AGUNG LAWONGAN VILLAGE NORTH DEMPO SUBDISTRICT PAGARALAM CITY

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To cite this article:
Oktariani, L., & Rizki, I. P. (2024). Analysis of Factors Affecting the Income of Celery (Apium graveolens I) Producers in Kerinjing Agung Lawongan Village North Dempo Subdistrict Pagaralam City. *Buletin Penelitian Sosial Ekonomi Pertanian Fakultas Pertanian Universitas Haluoleo*, *26*(1), 71–80. https://doi.org/10.37149/bpsosek.v26i1.1256

Received: May 28, 2024**; Accepted:** July 23, 2024**; Published:** July 24, 2024

ABSTRACT

In South Sumatra Province, celery plants are often found in highland sizes, such as the Pagar Alam area in Kerinjing Village, North Dempo District, which is one of the areas producing celery vegetables. In Kerinjing Village, celery plants have the potential to be developed. This research aims to decide the factors that impact the income of celery farmers and the amount of income generated from celery farming in Kerinjing Agung Lawongan Village, North Dempo District, Pagaralam City. This research was carried out from April 2023 to August 2023. It used a simple random method to take samples of farmers, while the Slovin method was used to decide the number of samples in this study, so the samples were 34 farmers from 150 populations. The variables employed in this study encompass farmer attributes such as age, educational attainment, agricultural experience, land size, and family size. The research used the multiple regression analysis method, utilizing SPSS and farming cost analysis for data processing. The research findings suggest that farming duration, production quantity, production expenses, and land size significantly affect the income variable. However, only the variables about the number of products and production costs exhibit a tangible impact. In contrast, the variables related to farming experience and land size do not demonstrate a substantial influence. The adjusted R-square in this study is 0.988, which means 98.8% of the independent variables can clarify the dependent variable. The average amount of celery production is 22,100 kg/Ha/MT, with the income of celery farmers being IDR. 97,475,400/Ha/MT.

Keywords: celery; income factors; multiple regression.

INTRODUCTION

Indonesia is a nation focused on agriculture because the majority of the population lives from agriculture, so agriculture is the industry that holds the highest importance in realizing the prosperity of the Indonesian people. Agriculture, an essential component of the nation's economy, is anticipated to augment regional revenue, particularly for rural inhabitants below the poverty threshold. Agriculture is a reliable sector that can improve the country's economy. (Anggriawan & Indrawati, 2013)

One of the activities in the agricultural sector is the cultivation of horticultural crops. Horticulture cultivation is an activity that has good prospects now and in the future. Celery is a type of horticultural plant that people need. Vegetable consumption is one way to improve nutrition and public health. Vegetable plants, especially celery, have an economical price, a distinctive aroma for food, and many health benefits. In addition, celery has health promotion potential because It contains pharmacological properties that are highly advantageous for human health treatment, prevention, and maintenance. (Rusdiana, 2018)

The celery plant (*Apium Graveolens I*) contains nutrients that benefit health. Celery is also known as a vegetable with a distinctive aroma. Celery is also a medicinal plant that can reduce hypertension, pain, heat, and other conditions. Celery is a versatile plant with a soft and crisp stem

and fresh green leaves with a distinctive aroma and taste. It can grow in subtropical and tropical climates. (Rusdiana, 2018)

In Indonesia, celery production is still relatively small. Generally, farmers in Indonesia cultivate celery as a side commodity. Celery is one of the essential commodities, and the demand for celery is always there throughout the year (Siburian, 2022). Indonesia still imports celery plants from the Netherlands, Australia, and the United States. This is because celery production in Indonesia is insufficient to meet national needs.

The ideal soil for celery plants is fertile, containing lots of organic matter (humus), good soil aeration and drainage, and soil reaction (pH) between 5.5-6.5 or optimum at pH 6.0-6.8. Celery plants are fond of soils that favor sodium, calcium, phosphorus, and boron salts. If the soil lacks sodium, the growth of celery plants will be stunted. A mixture of husk charcoal and soil is suitable for vertical cultivation. (Pratiwi et al., 2017). Husk charcoal adds permeable planting media (Onggo et al., 2017). Husk charcoal contains potassium macronutrients and is well-aerated to support plant growth (Ramdani et al., 2019).

Farm income is one form of farm performance measure. Agriculture is an achievable achievement through farming activities for one year or during one growing season, and it is measured based on income and profit. The welfare of farmer households depends on the income earned from farming (Wayan, 2018).

Based on research by (Siahaan et al., 2015), the variable land size and capital significantly affect vegetable farming income with a positive coefficient. The higher the land size and capital used, the higher the vegetable farm income. Meanwhile, labor does not significantly affect vegetable farming income.

The variables that substantially impact income include educational attainment, farming expertise, the number of dependents in the family, land size, production costs, and product selling prices, while the variable that has no effect is the age of farmers, with an R^2 value of 95.8%. This means that the seven independent variables affect income by 95.8%, and other outside factors influence 4.2% in the model (Azzura et al., 2017)

Based on research taken by Fallo (2021), it is concluded that partially the variables that significantly affect vegetable farming income in Mata Air village, Central Kupang District, Kupang Regency, include business capital (X_1). However, the variables of land size (X_2) and term of operation (X_3) had a limited impact on vegetable growing income in Central Kupang Tarus. Moreover, the variables of business capital, land size, and length of operation collectively substantially impact the income generated from vegetable growing.

Variable land size, fertilizer costs, seed costs, medicine costs, labor costs, and Farming Experience influence the income of cabbage farmers in Je'netallasa Village, Rumbia District, Jeneponto Regency. Partially carried out the t-test, the outcome shows that varies where the variable land size, fertilizer costs, and labor costs have a positive and significant impact on the income of cabbage farmers, and the variable cost of seeds, medicines, and the Farming Experience variable has an effect but is not significant to the income of cabbage farmers in Je'netallasa Village, Rumbia District, Jeneponto Regency (Jaya, 2019).

In South Sumatra Province, celery plants are often found in highland sizes such as in the Pagar Alam area, more precisely in Kerinjing Village, North Dempo District, which produces celery vegetables. Because the celery plant has the potential to be developed in Kerinjing Village, this study aims to determine the variables that impact the earnings of celery farmers and identify the characteristics that exert the most significant influence on their revenue.

MATERIALS AND METHODS

The research was conducted at Kerinjing Agung Lawongan Village in the North Dempo District of Pagaralam City in the South Sumatra Province. The research location was purposefully selected due to its significant role in celery growing. The research was carried out from April 2023 to August 2023.

Farmers were sampled using a simple random method called a social gathering system. In order to ascertain the number of samples, we used the Slovin method until the sample taken amounted to 34 farmers from the overall population of 150 celery farmers. The variables used in this study are the characteristics of farmers, including age (years), education level, length of farming, land size, and number of dependents.

The multiple linear regression analysis is used in this research. The testing criteria are the Classical Assumption Test, Coefficient of Determination, and Hypothesis Test in the form of an F test to answer the first objective and a t-test to answer the second objective to produce an equation:

$$Y = a + b\ X_{11} + b\ X_{22} + b\ X_{33} + b\ X_{44} \quad (1)$$

Description: Y : Income variable; a: Constant; b_1 , b , b_{23} , b_4 : Regression Coefficient; X_1 : Farming experience variable; X_2 : Variable amount of production; X_3 : Variable production cost; X_4 : Variable land size

Multiple linear regression examines the linear correlation and impact between the predictor variable(s) and the response variable(s). The decision-making criteria are determined by the significance value (Sig value). If the Sig value is more than 0.05, variable X does not have a stsignificant impact on variable Y. Alternatively, if the Sig value is below 0.05, variable X indeed has a terrible influence on variable Y.

The normality test determines whether the population is normally distributed (Susilawati et al., 2019). The Saphiro-Wilk test is a method to assess the normality of data distribution. If the significance value in the output table exceeds 0.05, the data follows a normal distribution. Conversely, if the significance value is below 0.05, it suggests that the data does not conform to a normal distribution. Saphiro-Wilk is used for analysis with several research samples of less than less (Ghozali, 2018).

Linearity refers to whether the independent variables can predict the independent variables in a specific relationship (Widana & Muliani, 2020). Linearity refers to the relationship between the dependent and independent variables, which is illustrated by a straight line within a definite range of independent variables (Rosalina et al., 2023). The fundamental principle guiding decision-making in the Linearity Test is to look at the significance value of the SPSS output table on the deviation from the Linearity line with the following rules (Setiawan, C.K, Yosepha 2020). If the significance value is> 0.05, then linearity happens, and if the significance value is <0.05, then there is no linearity

According to (Mubarak, 2021), multicollinearity means that the independent variables of the multiple regression model exhibit a perfect linear connection. It is not permitted to contain the same aspects, indicators, or dimensions among the independent variables to be analyzed. (Widana & Muliani, 2020). The test results of the multicollinearity test can be observed by many methods, as outlined below (Susilawati et al., 2019). If the tolerance value exceeds 0.10, it can be inferred that there is no multicollinearity. Conversely, multicollinearity is present if the tolerance value is less than or equal to 0.10. If the Variance Inflation Factor (VIF) value exceeds 10, it indicates the presence of multicollinearity in the data being tested, and vice versa.

Heteroscedasticity is one of the factors that cause simple linear regression models to be inefficient and inaccurate (Zahriyah et al., 2021). The Glesjer test is done by regressing the absolute value of the difference between the observed and predicted values of the model on the explanatory factors (Basuki, 2017). If the significance value for the correlation between the independent variable and the absolute residual is higher than 0.05, then there is no heteroscedasticity issue (Purnomo, 2016).

The F test is used to ascertain if all independent factors influence the dependent variable. The F distribution test compares the F table with the F value in the ANOVA table. Another method used is to see the magnitude of the significant probability value. According to (Ghozali, 2018), The foundation for the creation conclusions on the F test is as follows: a. If the significant value is more than 0.05 (α), then the H_0 is accepted, which means the independent factors do not have a significant effect on the dependent variable. b. If the significant value is less than 0.05 (α), H_0 is rejected, which means independent factors have a substantial simultaneous effect on the dependent factor.

According to (Ghozali, 2018), The t-test is employed to determine whether each independent variable impacts the dependent variable. The condition that an independent variable affects the dependent variable is when the significance probability value is less than α (5%). The t-test, also known as the partial test, measures the extent to which an independent variable contributes to the variation in the dependent variable. The rationale for drawing conclusions based on the t-test is as follows. Ho is accepted if the significance value of t> 0.05 or the t-count value < t-table. This indicates that the independent variable does not significantly impact the dependent variable, b. Ho is rejected if the significance value of t <0.05 or the t-count> t-table. This means that the independent variable exerts significant effects on the dependent variable.

The adjusted coefficient of determination (Adjusted R^2) quantifies the ratio of the overall influence of the independent variable (free) on the dependent variable (bound). The percentage indicates how much an independent variable can clarify the variation in the dependent variable. The Adjusted R^2 value falls from 0 to 1 (0 < Adjusted R^2 < 1).

RESULTS AND DISCUSSION

Respondent Characteristics

The characteristics of the farmers who became respondents in this study include age, the individual's educational attainment, duration of experience in farming, the amount of land owned or operated, and the number of family members relying on the individual. The identification becomes a description or requirement for farmers in conducting their farming business, which will certainly affect the level of income these farmers earn.

Table 1 shows that most of the farmers who cultivate celery in Kerinjing Agung Lawongan Village are of a productive age, namely the age of 25-45 years, with 22 respondents or 64.70%, while respondents who are an unproductive age amounted to 12 people or 35.30% of the 34 total respondents in this study. The age of farmers has a significant impact on their capacity to effectively manage their farming operations, where the physical abilities of farmers are still strong so that they can manage farming well. Well-managed farming affects the production produced, which certainly impacts the income earned by celery farmers. Meanwhile, farmers over 45 are considered less productive because their physical abilities are decreasing, so they are less than optimal in managing their farming business. Furthermore, of course, this can affect their celery production and income. celery farmer

Table 1. Respondent characteristics

Respondent characteristics	Celery Farmer	
	Number (people)	Percentage (%)
Age		
25-45 years old	22	64,70
>45 years	12	35,30
Education level		
Elementary School	9	26,47
Junior High School	13	38,23
High School	12	35,30
Farming Experience		
< 10 years	10	29,41
> 10 years	24	70,59
Land Size		
150 m^2 - 500 m^2	22	64,70
> 500 m^2	12	35,30
Number of Family Members		
1-3	13	38,24
4-6	21	61,76

Source: Primary data processed, 2023

Table 1 shows that most of the farmers who cultivate celery in Kerinjing Agung Lawongan Village are of a productive age, namely the age of 25-45 years, with 22 respondents or 64.70%, while respondents who are an unproductive age amounted to 12 people or 35.30% of the 34 total respondents in this study. Age significantly impacts farmers' capacity to effectively manage their farming operations, directly affecting their physical capabilities and ability to oversee agricultural activities successfully. Well-managed farming certainly affects the production produced, impacting the income of celery farmers. Based on the studies completed by (Chuzaimah et al., 2016), it was shown that the older the farmer's age, the more significant impact it has on their abilities and cognitive processes. However, increasing age also affects the productivity of farmers. In Pemulutan Ulu Village, the average age of sample farmers is 42.43 years, still at a productive age. However, if the age of these farmers continues to increase, their physical strength in working will decrease. Productivity will decrease, which will eventually lead to a decrease in income.

A degree in education is a vital capital needed to increase farm production. The education level is related to the ability of farmers to accept innovations or new technologies related to farming. The education level of respondent farmers in Kerinjing Agung Lawongan Village comprises individuals who have completed elementary school, junior high school, and senior high school. For the area, respondents who graduated from junior high school amounted to the most, namely 13 people, with a percentage of 38.23%. Meanwhile, the number of respondents who graduated from high school amounted to 12 people, with a percentage of 35.30%. At the same time, those who graduated from

elementary school had the smallest number of only nine people, with a percentage of 26.47%. The degree of schooling raised by farmers is expected to facilitate the absorption of new technologies that can be implemented in farming. The sample farmers have low education, which can be an obstacle to applying innovation in farming. This coincides with the research carried out by (Kumaladevi & Sunaryanto, 2019), which states that educated farmers tend to be more open to accepting and trying new things and adopting more modern things more quickly to improve the output of production, which, of course, affects increasing income.

Experience in farming owned by celery farmers affects the increase in farm production and farmers' income levels. The longer the experience in farming, the more skills it will add to farming. Farmer respondents in this study have the most experience in farming over ten years, which amounted to 24 people, with a percentage of 70.59%. Meanwhile, farmers who have farming experience under 10 years only amounted to 10 people, with a total percentage of 29.41%. In the research area, the sample farmers have a reasonably good level of experience above ten years, so that experience can support farming, which certainly impacts the income earned. Based on research completed by (Chuzaimah et al., 2016) stated that experience has a natural effect on increasing income because the more experienced a person is, the more efficient he will be in carrying out the work he is engaged in so that productivity increases and income also increases.

The land holdings held by respondent farmers are divided into two categories. Respondents with land sizes ranging from 100 m^2 to 500 m2 had 22 people and a percentage level of 64.70%. Respondents with land size above 500 m^2 amounted to 12 people with a percentage of 35.30%. The area of land owned by celery farmers in the village is still relatively small because the land has an average of under 500 m^2, in line with research completed by (Andrias et al., 2017), which states that land size affects production. The presence of agricultural land directly affects the impact of agricultural goods. Generally, it is believed that increasing the cultivated or planted land size leads to higher production from the land. An increase in the land size variable will result in a subsequent increase in production and farm income.

The total number of people living in a family of respondents ranges from 1 - 3 people and 4 - 6 people. For respondents who have 1 - 3 members, there are 13 people with a percentage of 38.24%. Meanwhile, respondents with 4-6 family members amounted to 21 people, with a percentage of 61.76%. The large number of family members owned by respondent farmers will be a driving force in carrying out farming activities to increase income and meet the needs of their families. This is in line with research (Nurjanah et al., 2018). The number of family dependents positively and significantly impacts the income level of maize farmers. The income level in a farming family is contingent upon the number of family members. As dependents increase, the expenses required to meet their demands also increase. Moreover, the size of the family can be seen as a workforce in agricultural activities, influencing farming output.

Celery Farming Revenue and Production Costs

Revenue in celery farming results from multiplying the amount of celery production by the selling price. Meanwhile, all inputs usually used in celery farming are the production costs. Production costs in celery farming consist of two categories of costs, namely variable and fixed costs. Variable costs are expenses that run out in one production process in celery farming, including the cost of purchasing seeds, fertilizers, medicines and labor, while the cost of equipment depreciation is included in fixed costs. The quantity of celery and the price determine the income of celery farmers. As the quantity and price per unit of output increase, farm revenue also increases. Conversely, as the quantity and price per unit of production decrease, farm income decreases. The description of celery farming is in Table 2.

Table 2. Overview of celery farming

Description	Unit	Average Value
Production	Kg/Ha/MT	22.100
Selling Price	(IDR/Kg)	7.074
Revenue	IDR/Ha/MT	156.335.400
Fixed Cost	IDR/Ha/MT	8.800.000
Variable Cost	IDR/Ha/MT	50.060.000
Total Cost	IDR/Ha/MT	58.860.000
Income	IDR/Ha/MT	97.475.400

Source: Primary data processed, 2023

According to the results of processed data after surveying the field, the average production of celery is 22,100 Kg / Ha / MT with a selling price of IDR7,074 / Kg. Depending on the multiplication between the average production amount and the selling price, the average receipt for celery farming can be generated at IDR. 156,335,400 / Ha / MT. On average, production costs for celery farming amounted to IDR. 97,475,400 / Ha / MT. The average income of celery farmers in Kerinjing Agung Lawongan Village, North Dempo District, Pagaralam City, South Sumatra Province, is IDR97,475,400/Ha/MT.

Factors Affecting Celery Farm Income

In this study, several variables affect the income variable of celery farmers. A multiple linear regression analysis was done to decide the dimensions and path of the independent variables' impact on the dependent variable. The multiple linear regression test also fulfilled the basic classical assumptions related to model estimation in this study, which is visible from the data processing output using SPSS. The tests comprise the Normality Test, Linearity Test, Multicollinearity Test, and Heteroscedasticity condition, which the equation model used in this study can represent. The basic assumptions must be met: the Test, Determination Coefficient Test, Simultaneous F Test, and Partial t-test. The first classic assumption test is the normality test, which is in Table 3 below.

Table 3. Normality test results

Unstandardized Residual	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
	0.192	13	0.200*	0.901	13	0.138

Based on Table 3, the Kolmogorov-Smirnov significance value and Saphiro-Wilk significance value are 0.200 and 0.138, respectively. Both values are more significant than 0.05. This follows the decision rules, meaning the data used in this research are spread commonly.

The linearity test is carried out to ascertain the presence of a linear correlation between the dependent variable (bound) and each independent variable to be tested in an equation model. The significance value of Deviation from Linearity for variable X_1 is 0.341, variable X_2 is 0.354, variable X_3 is 0.784, and variable X_4 is 0.463. Each independent variable has a significance value of deviation from linearity that exceeds 0.05. Therefore, according to the decision criteria, it may be inferred that there exists a direct correlation between the independent and the dependent variable.

Table 4. Multicollinearity test results

Model	Collinearity Statistics	
	Tolerance	VIF
(Constant)		
X_1	0.720	1.389
X_2	0.522	1.916
X_3	0.395	2.533
X_4	0.738	1.356

The multicollinearity test aims to assess the presence of a significant correlation among the independent variables in the regression model. The multicollinearity test results in Table 4 show that the VIF value for variable X_1 is 1.389, variable X_2 is 1.916, variable X_3 is 2.533, and variable X_4 is 1.356. These values are all below 10, suggesting the absence of multicollinearity. The tolerance values for variables X_1, X_2, X_3, and X_4 are 0.720, 0.522, 0.395, and 0.738, respectively. The tolerance value for the independent variables transcends 0.10. It goes back to the decision rules, where multicollinearity is absent.

The heteroscedasticity test is done to ascertain if there is a disparity in the variance among the residuals of various data in the regression equation model, which is observed in Table 5 below.

Table 5. Heteroscedasticity test results

Model	Unstandardized Coefficients		t	Sig.
	B	Std. Error		
(Constant)	356708.817	233860.475	1.525	0.166
X_1	-8653.893	14595.468	-0.593	0.570
X_2	-63.238	150.140	-0.421	0.685
X_3	-0.008	0.118	-0.064	0.950
X_4	31.543	223.971	0.141	0.891

According to the results of the Glejser test conducted, it is observable that the significance value is 0.570 for variable X_1, 0.685 for variable X_2, 0.950 for variable X_3, and 0.891 for variable X_4. Based on the observation that the values of all independent variables exceed 0.05, it can be inferred that there is an absence of heteroscedasticity in the multiple regression model employed in this research.

The classical assumption test on the multiple regression equation employed in this study indicates that it satisfies the necessary criteria. Therefore, a multiple linear regression equation model may be constructed with the findings of SPSS data processing in Table 6 below.

Table 6. Factors affecting celery farming income in Kerinjing Agung Lawongan village.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-133342.185	439410.035		-0.303	0.769
X_1	35282.508	27424.023	0.049	1.287	0.234
X_2	7392.188	282.104	1.160	26.204	0.000
X_3	-1.356	0.222	-0.311	-6.110	0.000
X_4	745.408	420.828	0.066	1.771	0.114
R	[a]0.996				
R Square	0.992				
Adjusted R Square	0.988				
F	242.296				0.000

$$Y = -133342{,}185 + 35282{,}508\ X_1 + 7392{,}188\ X_2 - 1{,}356\ X_3 + 745{,}408\ X_4 \quad (2)$$

It is known that the constant parameter estimate value of -33342.185 shows a negative sign. The negative constant value can be ignored as long as the tested regression model has met classical assumptions' basic requirements.

The coefficient of determination in multiple linear regression is reflected in the adjusted R-square, as the adjusted R-square value is calculated only based on the significant independent variables. The Adjusted R-square value in this research is 0.988, which means that 98.8% of the variation in the dependent variable (income) can be clarified by the independent factors (farming experience, total production, production costs, and land size). The remaining 1.2% of the variation can be attributed to other independent variables omitted in the equation model.

Based on the F value test findings, the significant value 0.000 indicates that it is smaller than $\alpha = 0.05$. Therefore, it can be deduced that farmer age, farming experience, land size, and production costs collectively influence the income variable.

Farming Experience

The regression analysis results indicate that the parameter estimation for the farming experience variable is 35282,508, suggesting a positive impact on farmers' income. This information can be found in Table 6. This means that if there is an additional 1% of experience owned by farmers, it will increase income by 35282,508. Based on the significance value of t, which is equal to 0,234 greater than $\alpha = 0.05$, it means that the farming experience variable (X_1) has no natural effect on the income variable (Y). Therefore, increasing or decreasing 1% of farming experience does not significantly affect the income received by celery farmers.

This is in line with research by (Jaya, 2019) that partially, the farming experience variable has an effect but is not significant to the income of cabbage farmers in Je'netallasa Village, Rumbia District, Jeneponto Regency. Likewise, research conducted by (Kirana, 2023) showed that the farming experience variable partially did not have a notable impact on rice farming income in Pruwatan Village, Bumiayu District, Brebes Regency. This is consistent with research findings (Muzdalifah et al., 2023), who argued that experience does not substantially impact the income of pamelo orange farmers in Pati Regency. According to research (Tunas et al., 2023), there is no positive and substantial impact on agricultural revenue. In connection with the research conducted (Perdana et al., 2019), partially, the impact of farming expertise on the income of sweet corn producers is both favorable and negligible in Tanjung Raya District, Agam Regency. Farming experience can not ensure how big or small the income will be, and this is caused by several natural disaster factors such as strong winds, heavy rain, newly planted corn being eaten by enemies, and some of the almost harvested corn being eaten by animals.

It can be concluded that although farming experience has been reached, it is not a factor in increasing farmers' income. Besides that, farmers still use the old way of working and do not follow the direction of counseling obtained from the Department of Agriculture, which is why the farming experience has not affected the increase in income of cabbage farmers.

Production Quantity

In Table 6, it is visible that the parameter of the variable estimate of the amount of production in this study amounted to 7392.188, which means that it positively influences the income of celery farmers. A t significance value of 0.000, which is less than α = 0.05, implies that the production amount can vary (X_2) and has a tangible impact on the income variable (Y). So, with the assumption of ceteris paribus, an increase in income will occur by IDR. 7392,188 per square meter in one growing season if there is an increase in production by 1%. This coincides with research carried out by (Pradnyawati and Cipta, 2021). The study demonstrates that the output level substantially impacts the revenue of vegetable growers in the Baturiti District. The land size, capital, and total production exert a partially favorable and considerable influence on the revenue of vegetable producers in Baturiti District. It was likewise based on research conducted by (Alitawan, 2016), which states that production benefits earnings.

Production Cost

The multiple regression results on the production cost variable with an estimated parameter value of -1.356 show a negative sign, which means that the addition of production costs will cause a reduction in IDR income. 1.356 per square meter per growing season, as seen in Table 6, furthermore, at a significance level of t of 0.000 less than α = 0.05 where there is a real impact of the production cost variable (X_3) on the income variable (Y). Based on research results (Usman & Yanti, 2020) showed that production costs had a negative and substantial impact on the earnings of female rice cultivators in Samudera District. This aligns with research conducted by (Sri Fitri Handayani, 2020). The statement asserts that costs have a substantial impact on revenue. According to (Wardani and Yani 2022), labor costs, fertilizer, and pesticide costs substantially impact the earnings of wet-rice farmers.

Land Size

According to the results using SPSS in Table 6, it is visible that the variable of land size (X_4) used in celery farming does not show a significant effect on the income variable (Y). This is evident in the t-significance value of 0.114, higher than the value of α = 0.05. Therefore, it may be concluded that adding or reducing land size does not increase the income received by celery farmers. The regression coefficient value of 745.408 implies that in the event of a rise in land size by 1%, it will culminate in a higher level of earnings by 745.408. This is in line with research taken by (Astari and Setiawina, 2016), where land size does not impact the earnings of asparagus cultivators. According to research by (Nazizah et al., 2023), the variable representing land size does not have a statistically significant impact on the income of rice growers. The extent of land farmers possess in the research location cannot affect the income earned. Research conducted by (Saragih, 2020) indicated that the variable of land size has no impact on income. This is because some farmers have large land sizes, but the production results are not comparable.

CONCLUSIONS AND SUGGESTIONS

Simultaneously, the variables of experience, value of production, production costs, and land size have a natural or significant impact on farmers' income. Partially, only the variable production and production costs have a tangible impact, while the variable length of farming experience and land size have no natural effect.

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