International Journal of Technology and Education Research

https://e-journal.citakonsultindo.or.id/index.php/IJETER

E-ISSN: 2986-0733

Analysis Of Factors Influencing The Production And Income Of Seedless Red Watermelon (*Citrullus Lanatus*) Farming In Amandete Village, Amonggedo District, Konawe Regency

Triana Putri[1], Lukman Yunus[2], Agustono Slamet[2]

[1]Alumnus of Agribusiness, Faculty of Agriculture, Halu Oleo University, Kendari City, Indonesia
[2]Lecturer, Faculty of Agriculture, Halu Oleo University, Kendari City, Indonesia

Corresponding Author: trianaputri03.hy@gmail.com

Abstract

This study aims to 1) analyze the effect of production factor use in seedless red watermelon farming in Amandete Village, 2) analyze the effect of income factors in watermelon farming in Amandete Village, and 3) analyze the production level and income of seedless red watermelon farming in Amandete Village. The research was conducted from November to December 2024. The research location was determined *purposively*. The sample consisted of 30 farmers and was determined using the census method. Data were analyzed using multiple linear regression analysis with the *Cobb-Douglas* production function and income analysis. The results show that the production factor with a significant effect is chicken manure, whereas land area, seeds, NPK fertilizer, pesticides, capital, and labor have no significant effect. As for the factors influencing income, total production cost and revenue have a significant effect on income, whereas production volume has no significant effect on income. The average production of seedless red watermelon farming per hectare in one growing season is 8,950 kg. The average net income per hectare in one growing season is Rp31,610,767.

Keywords: production, income, seedless red watermelon farming

INTRODUCTION

The agricultural sector plays an important role in the Indonesian economy, particularly in providing food, creating employment, and improving community welfare. The development of high-value agricultural commodities is one of the efforts to increase farmers' income while strengthening the contribution of the agricultural sector to the national economy (Azmi et al.,

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

2022; Amelia et al., 2022). One subsector with potential for development is horticulture, which encompasses fruits, vegetables, medicinal plants, and ornamental plants (Pitaloka, 2017). Among these commodities, watermelon is a fruit crop with economic prospects because it is in high demand among consumers and can be cultivated in a relatively short time.

Watermelon is a horticultural crop that originates from the dry tropical and subtropical regions of Africa and later spread to various countries, including Indonesia. By type, the watermelon cultivated in Indonesia generally consists of local and hybrid varieties (Wulandari, 2012). Watermelon cultivation has the advantage of a relatively short growing period, around 70–80 days, so it can serve as an alternative farming enterprise or as an intercrop on paddy fields during the dry season. Besides being relatively easy to cultivate, this commodity also has promising economic value for farmers (Amelia et al., 2022). Consumer demand for watermelon is also supported by its sweet taste, nutritional content, and refreshing fruit characteristics (Sa'diyah et al., 2021). Thus, the development of watermelon farming has the potential to become a source of income for rural communities.

Konawe Regency, Southeast Sulawesi Province, is one of the regions with potential for agricultural sector development. Although the contribution of the agricultural sector to the Gross Regional Domestic Product (GRDP) of Konawe Regency declined from 26.53% in 2019 to 15.94% in 2023, the sector still holds the second-largest position after the manufacturing industry (BPS Kabupaten Konawe, 2024). This agricultural potential is also reflected in the development of watermelon production. In 2020, watermelon production was recorded at 1,731 quintals with a harvested area of 68 ha, and then increased to 2,517 quintals in 2021. Production temporarily declined to 2,059 quintals in 2022 but rose again to 3,551 quintals with a harvested area of 72 ha in 2023. These data show that watermelon production in Konawe Regency fluctuated but showed an overall increase over the 2020–2023 period. This change in production may be related to the use of production factors, such as seeds, fertilizer, pesticides, labor, land, and capital, which determine the success of farming activities (Sa'diyah et al., 2021).

One of the areas contributing to watermelon production in Konawe Regency is Amonggedo District. According to BPS Kabupaten Konawe (2022), watermelon production in this district reached 515 quintals with a harvested area of 19 ha, or a productivity of 27.11 quintals/ha. This achievement places Amonggedo District as the area with the highest watermelon production compared with the other districts in Konawe Regency. One of the villages that also develops this commodity is Amandete Village. Some of the residents of Amandete Village depend on the agricultural sector for their livelihood, particularly watermelon cultivation. Based on a preliminary survey, there are about 30 farmers growing watermelon,

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

with harvested areas ranging from 25 ares to 2 ha. The production obtained can reach 20 tons in one growing season, with average capital of about Rp25,000,000 and revenue of about Rp50,000,000 per hectare per growing season. In one year, farmers can carry out up to three growing seasons, depending on weather conditions.

The magnitude of this production and revenue potential does not necessarily reflect an optimal level of income. In farming activities, income is determined by the farmer's ability to manage production factors and control the costs incurred. A larger land area does not always generate higher income if the use of seeds, fertilizer, pesticides, labor, and capital is not carried out efficiently. In addition, high production volume does not necessarily yield maximum profit because income is influenced by the selling price and total production cost. Economically, farm income is the difference between total revenue and total costs incurred. Therefore, an understanding of the relationship among production factor use, production output, and farming costs is needed so that farmers can make business decisions more appropriately (Amelia et al., 2022).

Several previous studies have examined factors related to the production and income of watermelon farming. Sulastri et al. (2024) analyzed the effects of land area, seedlings, labor, fertilizer, and pesticides on watermelon production. Amelia et al. (2022) examined watermelon farming income based on total cost and revenue components, while Apriyanti (2019) showed that production volume significantly affects the income of seedless red watermelon farming. These findings show that the use of production inputs and harvest output are important aspects in determining farming success. However, production and income conditions can differ according to regional characteristics, production factor use, and the selling price received by farmers. Therefore, a study is needed that specifically describes the condition of seedless red watermelon farming in Amandete Village, Amonggedo District, Konawe Regency.

Based on the above description, this study focuses on analyzing the factors influencing the production and income of seedless red watermelon farming in Amandete Village. The factors examined include land area, labor, capital, seeds, fertilizer, pesticides, production cost, selling price, revenue, and production volume, according to their relevance to farming production and income. This study is expected to provide an overview of production factor use and the economic condition of seedless red watermelon farming, while also identifying the most dominant factors in determining farmers' production and income. The results are expected to serve as a consideration for farmers in managing their farms more efficiently and for related parties in supporting the development of the watermelon commodity in Konawe Regency.

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

International Journal of Technology and Education Research

https://e-journal.citakonsultindo.or.id/index.php/IJETER

E-ISSN: 2986-0733

METHOD

This research was conducted in Amandete Village, Amonggedo District, Konawe Regency, from November 2024 to March 2025. The research location was determined *purposively* on the grounds that Amandete Village is one of the seedless red watermelon production centers in Amonggedo District, with a harvested area of 28 ha, or about 35% of the total watermelon harvested area in Konawe Regency.

The research population was all farmers growing seedless red watermelon, totaling 30 people. The sample was determined using the census method, so that all members of the population were taken as respondents. The data used consisted of primary and secondary data. Primary data were obtained through observation, interviews using questionnaires, recording, and documentation, while secondary data were obtained from the Central Bureau of Statistics (BPS), related agencies, and relevant literature.

Data were analyzed using quantitative descriptive analysis and regression. The factors influencing production were analyzed using the Cobb-Douglas production function transformed into natural logarithm (ln) form so that it becomes a multiple linear regression, with the following equation:

$$\begin{aligned}\ln Y = {} & \ln a + b_1 \ln X_1 + b_2 \ln X_2 \\ & + b_3 \ln X_3 + b_4 \ln X_4 + b_5 \ln X_5 \\ & + b_6 \ln X_6 + b_7 \ln X_7 + u\end{aligned}$$

Where:

(Y) = watermelon production (kg);
(X_1) = land area (ha);
(X_2) = hybrid seeds (grams);
(X_3) = chicken manure (kg);
(X_4) = NPK fertilizer (kg);
(X_5) = dolomite (kg);
(X_6) = pesticides (liters); and
(X_7) = labor (person-days);
(a) = constant;
(b_i) = regression coefficient; and
(u) = error term.

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

International Journal of Technology and Education Research

https://e-journal.citakonsultindo.or.id/index.php/IJETER

E-ISSN: 2986-0733

Furthermore, the factors influencing income were analyzed using multiple linear regression with the following equation:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$$

Where:

(Y) = farm income (Rp);
(X_1) = production volume (kg);
(X_2) = selling price (Rp/kg);
(X_3) = total production cost (Rp);
(X_4) = revenue (Rp);
(\beta_0) = constant;
(\beta_i) = regression coefficient; and
(e) = error term.

Regression model testing was carried out through classical assumption tests, which include normality, multicollinearity, and heteroscedasticity tests. Subsequently, statistical testing was carried out using the coefficient of determination (R^2), the F-test to determine the simultaneous effect of the independent variables, and the t-test to determine the partial effect. The significance level used was 5% ($\alpha = 0.05$).

Farm income analysis was carried out to determine the amount of farmers' income in one growing season using the following formula:

I=TR-TC

Where:

(I) = farm income (Rp);
(TR) = total revenue (Rp); and
(TC) = total production cost (Rp).

Total revenue is obtained by multiplying production volume by the selling price, while total cost is all costs incurred during the production process.

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

International Journal of Technology and Education Research

https://e-journal.citakonsultindo.or.id/index.php/IJETER

E-ISSN: 2986-0733

RESULTS AND DISCUSSION

Production and Income of Seedless Red Watermelon Farming

Production is one of the indicators of farming success that determines the amount of farmers' revenue and income. Based on the results of research on 30 farmers in Amandete Village, seedless red watermelon production shows variation among farmers. The distribution of production in one growing season is presented in Table 1.

Table 1. Production Results of Seedless Red Watermelon Farming in Amandete Village

No.	Production (kg/ha/season)	Frequency
1	3,000–8,999	18
2	9,000–14,999	5
3	15,000–21,000	7
	Total	30

Table 1 shows that 18 farmers (60%) produced within the interval of 3,000–8,999 kg/ha/season, 5 farmers (16.67%) were in the interval of 9,000–14,999 kg/ha/season, and 7 farmers (23.33%) produced within the interval of 15,000–21,000 kg/ha/season. The dominance of farmers in the lowest production group shows that production achievement is not yet evenly distributed. These differences are suspected to be related to the use and management of production factors by each farmer.

Farm income is influenced by revenue and the costs incurred during the production process. These costs consist of variable costs and fixed costs. The average variable costs incurred by farmers in one growing season are presented in Table 17.

Table 2. Average Variable Costs of Seedless Red Watermelon Farming in Amandete Village

No.	Description	Average Cost (Rp/ha/season)
1	Seeds	2,846,000
2	Chicken manure	1,653,333
3	NPK fertilizer	3,306,667
4	Dolomite lime	467,000
5	Pesticides	525,000
6	Tractor rental	115,000
	Total	8,913,000

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

International Journal of Technology and Education Research

https://e-journal.citakonsultindo.or.id/index.php/IJETER

E-ISSN: 2986-0733

Based on Table 2, the average variable cost reached Rp8,913,000/ha/season. The largest expenditure came from NPK fertilizer at Rp3,306,667, followed by seeds at Rp2,846,000 and chicken manure at Rp1,653,333. Meanwhile, the smallest expenditure was tractor rental at Rp115,000. This shows that production inputs, particularly fertilizer and seeds, are important components in financing watermelon farming.

In addition to variable costs, farmers also incur fixed costs in the form of equipment depreciation. The details of the fixed costs of seedless red watermelon farming are presented in Table 3.

Table 3. Average Fixed Costs of Seedless Red Watermelon Farming in Amandete Village

No.	Description	Average Depreciation (Rp/ha/season)
1	Hoe	161,582
2	Sprayer	143,074
3	Machete	112,698
4	Spade	121,148
5	Sickle	119,531
6	Tractor	537,333
7	Mulch	862,500
8	Mulch perforator	5,249
	Total	2,063,117

Table 3 shows that the average equipment depreciation cost reached Rp2,063,117/ha/season. The largest depreciation came from the use of mulch at Rp862,500 and the tractor at Rp537,333, while the smallest depreciation came from the mulch perforator at Rp5,249. These differences are influenced by the type of equipment, purchase value, and length of use. These variable costs and fixed costs are components that need to be taken into account in determining farm income.

From the marketing side, the average selling price of seedless red watermelon in Amandete Village is Rp5,000/kg. This selling price may change according to demand, supply, and production volume at harvest. When production is abundant, prices tend to fall, whereas when production declines, prices relatively rise. These conditions also affect the revenue received by farmers.

Farm revenue is the product of production volume and selling price (Soekartawi, 2006). The distribution of the revenue of seedless red watermelon farmers is presented in Table 4.

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

International Journal of Technology and Education Research

https://e-journal.citakonsultindo.or.id/index.php/IJETER

E-ISSN: 2986-0733

Table 4. Revenue of Seedless Red Watermelon Farming in Amandete Village

No.	Revenue (Rp/ha/season)	Frequency
1	15,000,000–44,999,999	21
2	45,000,000–74,999,999	2
3	75,000,000–105,000,000	7
	Total	30

Table 4 shows that 21 farmers (70%) obtained revenue in the interval of Rp15,000,000–Rp44,999,999, 2 farmers (6.67%) were in the interval of Rp45,000,000–Rp74,999,999, and 7 farmers (23.33%) obtained revenue in the interval of Rp75,000,000–Rp105,000,000. The dominance of farmers in the lowest revenue group shows differences in farming ability to generate revenue, which are related to production volume and the selling price received.

Furthermore, farm income is calculated based on the difference between revenue and the costs incurred during the production process (Soekartawi, 2006). The distribution of the gross income of seedless red watermelon farmers is presented in Table 5.

Table 5. Gross Income of Seedless Red Watermelon Farming in Amandete Village

No.	Gross Income (Rp/ha/season)	Frequency
1	10,000,000–30,999,999	13
2	31,000,000–51,999,999	6
3	52,000,000–73,999,999	11
	Total	30

Based on Table 5, 13 farmers obtained gross income in the interval of Rp10,000,000–Rp30,999,999, 6 farmers were in the interval of Rp31,000,000–Rp51,999,999, and 11 farmers obtained income in the interval of Rp52,000,000–Rp73,999,999. These results show variation in gross income among farmers, which is related to differences in revenue and production costs.

Meanwhile, the distribution of farmers' net income after taking into account expenditures during farming activities is presented in Table 8.

Table 8. Net Income of Seedless Red Watermelon Farming in Amandete Village

No.	Net Income (Rp/ha/season)	Frequency
1	7,000,000–27,999,999	18
2	28,000,000–48,999,999	7

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

International Journal of Technology and Education Research

https://e-journal.citakonsultindo.or.id/index.php/IJETER

E-ISSN: 2986-0733

3	49,000,000–69,999,999	5
	Total	30

Table 8 shows that 18 farmers (60%) obtained net income in the interval of Rp7,000,000–Rp27,999,999, 7 farmers (23.33%) were in the interval of Rp28,000,000–Rp48,999,999, and 5 farmers (16.67%) obtained income in the interval of Rp49,000,000–Rp69,999,999. The dominance of farmers in the lowest income group shows that the income obtained is not yet evenly distributed. This condition indicates the importance of efficient use of production factors and cost control so that the revenue obtained can generate more optimal income.

Factors Influencing the Production of Seedless Red Watermelon Farming

The analysis of factors influencing production was carried out using the Cobb-Douglas production function with seven independent variables, namely land area, seeds, chicken manure, NPK fertilizer, dolomite, pesticides, and labor. Classical assumption testing showed that the significance value of the normality test was 0.200 (>0.05), the VIF value ranged from 1.513–4.195 with *tolerance* greater than 0.10, and all variables in the Glejser test had significance values greater than 0.05. Thus, based on these test results, the model shows no problems of normality, multicollinearity, or heteroscedasticity.

The estimation results of the factors influencing seedless red watermelon farming production are presented in Table 9.

Table 9. Estimation Results of Factors Influencing Seedless Red Watermelon Farming Production in Amandete Village

No.	Variable	Coefficient (B)	t-value	Sig.
1	Constant	7.002	1.561	0.133
2	Land area	0.032	0.236	0.816
3	Seeds	0.039	0.142	0.888
4	Chicken manure	0.585	2.872	0.009
5	NPK fertilizer	0.103	0.753	0.460
6	Dolomite	-0.216	-1.704	0.103
7	Pesticides	-0.625	-2.032	0.055
8	Labor	0.076	0.772	0.449
	F-value	5.963		0.000
	Coefficient of determination (R^2)	0.694		

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

International Journal of Technology and Education Research

https://e-journal.citakonsultindo.or.id/index.php/IJETER

E-ISSN: 2986-0733

	Correlation coefficient (R)	0.833		

Table 9 shows a coefficient of determination (R^2) of 0.694, which means that 69.4% of the variation in production can be explained by the independent variables in the model, while the remaining 30.6% is influenced by factors outside the study. The simultaneous test yielded an F value of 5.963 with a significance of 0.000 (<0.05). Thus, all independent variables together have a significant effect on seedless red watermelon production.

Partially, only chicken manure has a positive and significant effect on production. The other variables, namely land area, seeds, NPK fertilizer, dolomite, pesticides, and labor, have no significant effect at the 5% level.

The land area variable has a coefficient of 0.032 with a significance of 0.816 (>0.05). The positive direction indicates that increasing land area tends to increase production, but the effect is not significant. This shows that adding land does not necessarily increase production if it is not accompanied by optimal input management. This finding differs from the study by Noviyanti and Awaliyah (2022), which showed that land area has a positive effect on watermelon farming production and income.

The seed variable has a coefficient of 0.039 with a significance of 0.888 (>0.05), so it has no significant effect on production. This condition may be related to the use of relatively uniform seed types and differences in the amount of seed among farmers that are not very large. This result is consistent with Amelia et al. (2022), who found that seeds have no significant effect on watermelon production. Besides quantity, the quality and germination capacity of seeds also need attention so that their use supports production yield (Dudato et al., 2020).

The chicken manure variable has a coefficient of 0.585 with a significance of 0.009 (<0.05), so it has a positive and significant effect on production. In the Cobb-Douglas function, a 1% increase in chicken manure use tends to increase production by 0.585%, assuming other factors remain constant. This result is consistent with Asriyana et al. (2020), who showed that applying chicken manure can improve the growth and yield of watermelon plants, including plant length, number of female flowers, fruit length, and fruit diameter.

The NPK fertilizer variable has a coefficient of 0.103 with a significance of 0.460 (>0.05). Although the direction is positive, its effect on production is not significant. This result shows that increasing the use of NPK fertilizer has not been proven to significantly increase production under the conditions of this study. This finding differs from Jasmine et al. (2015), who showed that increasing the NPK fertilizer dose can increase watermelon fruit weight. This difference may be related to the dose and the accuracy of fertilizer application.

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

International Journal of Technology and Education Research

https://e-journal.citakonsultindo.or.id/index.php/IJETER

E-ISSN: 2986-0733

The dolomite variable has a coefficient of -0.216 with a significance of 0.103 (>0.05), while pesticides have a coefficient of -0.625 with a significance of 0.055 (>0.05). Both show a negative direction of effect but are not significant for production. Dolomite use needs to be adjusted to soil conditions, while pesticides need to be applied according to the type of pest attack and the recommended dose. The result for pesticides is consistent with Sa'diyah et al. (2021), who found that pesticide use has no significant effect on watermelon production. Iswara and Nuraini (2022) also showed that increasing the dolomite dose is not always directly proportional to an increase in crop yield.

The labor variable has a coefficient of 0.076 with a significance of 0.449 (>0.05), so it has no significant effect on production. This result shows that adding labor does not necessarily increase yield if it is not accompanied by effective execution of the work. This finding is consistent with Sulastri et al. (2024), who stated that labor has no significant effect on watermelon production.

Factors Influencing the Income of Seedless Red Watermelon Farming

The analysis of factors influencing income was carried out using multiple linear regression. Based on the classical assumption test results, the Kolmogorov-Smirnov significance value was 0.200 (>0.05), the VIF value was 2.195, and all variables in the Glejser test had significance values greater than 0.05. These results show that the model meets the classical assumption testing criteria based on the reported results.

The estimation results of the factors influencing the income of seedless red watermelon farming in Amandete Village are presented in Table 10.

Table 10. Estimation Results of Factors Influencing Seedless Red Watermelon Farming Income in Amandete Village

No.	Variable	Coefficient (B)	t-value	Sig.
1	Constant	-9.807	-4.272	0.000
2	Production volume	1.993	0.107	0.916
3	Total production cost	-0.346	-1.037	0.000
4	Revenue	1.357	6.963	0.000
	F-value	34.813		0.000
	Coefficient of determination (R^2)	0.996		
	Correlation coefficient (R)	0.998		

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

Table 10 shows a coefficient of determination (R^2) of 0.996, which means that 99.6% of the variation in income can be explained by the independent variables in the model, while the remaining 0.4% is explained by factors outside the study. The simultaneous test yielded an F value of 34.813 with a significance of 0.000 (<0.05). Based on these results, production volume, total production cost, and revenue together are significantly related to the income of seedless red watermelon farming.

Partially, production volume has no significant effect on income, while total production cost and revenue are recorded as having a significant effect based on the significance values in Table 23.

The production volume variable has a coefficient of 1.993 with a significance of 0.916 (>0.05), so it has no significant effect on income. The positive direction indicates that increasing production volume tends to increase income, but the effect has not been statistically proven. This shows that an increase in production needs to be accompanied by an adequate selling price to generate additional income. This finding is consistent with Apriyanti (2019), who explained that high production does not necessarily increase income if it is not supported by a profitable selling price.

The total production cost variable has a coefficient of -0.346 with a significance value of 0.000 as stated in Table 23. The negative coefficient indicates that an increase in production costs tends to reduce income. This condition underscores the importance of efficient use of production inputs so that rising expenditures do not excessively reduce income. This result is consistent with Sasongko et al. (2021), who emphasized the importance of cost management in increasing watermelon farming income.

The revenue variable has a coefficient of 1.357 with a significance of 0.000 (<0.05), so it has a positive and significant effect on income based on the estimation results. An increase in revenue can occur through a greater volume of production being marketed or a better selling price. This finding is consistent with Wahyuni et al. (2022), who stated that an increase in watermelon farming revenue can have a positive impact on farmers' income. Therefore, an increase in revenue needs to be accompanied by cost control so that it can generate more optimal income.

CONCLUSION

Based on the research results, seedless red watermelon production in Amandete Village ranged from 3,000–20,000 kg/ha/season, with an average of 8,950 kg/ha/season. Farmers' net income ranged from Rp7,026,000–Rp69,521,600 with an average of Rp31,610,767/ha/season.

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

These results show that seedless red watermelon farming has profitable economic potential for farmers.

The analysis of production factors shows that land area, seeds, chicken manure, NPK fertilizer, dolomite, pesticides, and labor simultaneously have a significant effect on production. However, partially only chicken manure has a positive and significant effect. Meanwhile, the factors influencing income show that total production cost has a negative and significant effect, revenue has a positive and significant effect, while production volume has no significant effect on income.

Farmers are advised to improve the efficiency of production factor use, especially chicken manure, and to control production costs so that farm income is more optimal. Local governments are expected to provide mentoring and support to farmers through technical extension services and facilitation of production input procurement. Future research is advised to expand the study area, the number of respondents, and the observation period in order to obtain a more comprehensive picture of watermelon farming production and income.

REFERENCE

Amin, N. F., Garancang, S., & Abunawas, K. (2023). Konsep umum populasi dan sampel dalam penelitian. *Pilar, 14*(1), 15–31.

Amelia, E. D., Sutrisno, J., Hastuti, D., & Wahyuningsih, S. (2022). Analisis faktor-faktor yang memengaruhi pendapatan usahatani semangka (*Citrullus lanatus*) di Desa Jipang Kecamatan Penawangan Kabupaten Grobogan. *Proceedings Series on Physical & Formal Sciences, 4*, 254–262.

Apriyanti, N. (2019). *Faktor-faktor yang memengaruhi pendapatan usahatani semangka non biji di Desa Sungai Pagar Kecamatan Kampar Kiri Hilir Kabupaten Kampar* [Disertasi, Universitas Islam Riau].

Arikunto, S. (2010). *Metode penelitian sosial*. Rineka Cipta.

Azmi, Y., Yulistiyono, A., Karyasa, T. B., & Putra, R. P. (2022). *Pertanian terpadu*. Global Eksekutif Teknologi.

Badan Pusat Statistik Kabupaten Konawe. (2024a). *Distribusi persentase produk domestik regional bruto (PDRB) atas dasar harga berlaku menurut lapangan usaha di Kabupaten Konawe 2019–2023*.

Badan Pusat Statistik Kabupaten Konawe. (2024b). *Produksi dan luas panen tanaman semangka di Kabupaten Konawe tahun 2020–2023*.

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

Badan Pusat Statistik Kabupaten Konawe. (2024c). *Tanaman hortikultura Kabupaten Konawe tahun 2022*.

Dewi, I. A. N. U., & Yuliarmi, N. (2017). Pengaruh modal, tenaga kerja, dan luas lahan terhadap jumlah produksi kopi arabika di Kecamatan Kintamani Kabupaten Bangli. *E-Jurnal Ekonomi Pembangunan, 6*(6), 1127–1156.

Dudato, G. M., Kaunang, C. L., Telleng, M. M., & Sumolang, C. I. J. (2020). Karakter agronomi sorgum varietas Samurai II fase vegetatif yang ditanam pada jarak tanam berbeda. *Zootec, 40*(2), 773–780.

Ghozali, I., & Catell, N. J. (2002). *Statistik non-parametrik: Teori dan aplikasi dengan program SPSS*. Badan Penerbit Universitas Diponegoro.

Iswara, F. V., & Nuraini, Y. (2022). Pengaruh pemberian dolomit dan pupuk anorganik terhadap serapan fosfat, populasi bakteri pelarut fosfat dan produksi padi. *Jurnal Tanah dan Sumberdaya Lahan, 9*(2), 255–265.

Jasmine, H. Q. F. C. P., Ginting, J., & Siagian, B. (2015). Respon pertumbuhan dan produksi semangka (*Citrullus vulgaris* Schard.) terhadap konsentrasi paclobutrazol dan dosis pupuk NPK. *Jurnal Online Agroteknologi, 2*(3), 967–974.

Masriyana, M., Hendarto, K., Yusnaini, S., & Ginting, Y. C. (2020). Pengaruh aplikasi pupuk hayati dan pupuk kandang (ayam dan sapi) terhadap pertumbuhan dan hasil tanaman semangka (*Citrullus lanatus*). *Jurnal Agrotek Tropika, 8*(3), 511–516.

Novianty, A., & Awaliyah, F. (2022). Pengaruh luas lahan terhadap pendapatan usahatani semangka di Desa Cikadu Kecamatan Cikalong Kabupaten Tasikmalaya. *Mimbar Agribisnis: Jurnal Pemikiran Masyarakat Ilmiah Berwawasan Agribisnis, 8*(1), 424–432.

Pitaloka, D. (2017). Hortikultura: Potensi, pengembangan dan tantangan. *G-Tech: Jurnal Teknologi Terapan, 1*(1), 1–4.

Rianse, U., & Abdi. (2009). *Metodologi penelitian sosial dan ekonomi: Teori dan aplikasinya*. Alfabeta.

Sa'diyah, H., Ekawati, I., & Isdiantoni, I. (2021). Faktor-faktor yang memengaruhi produksi usahatani semangka di lahan kering Pulau Poteran. *Jurnal Pertanian Cemara, 18*(1), 84–93.

Saleh, L. (2017). Penentuan sektor ekonomi unggulan dan pengembangan sub sektor unggulan pertanian terhadap ketahanan ekonomi daerah di Kabupaten Konawe Sulawesi Tenggara. *Agritech: Jurnal Fakultas Pertanian Universitas Muhammadiyah Purwokerto, 17*(1), 73–86.

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

Sasongko, A., & Soejono, D. (2021). Sistem pengusahaan usahatani semangka di lahan pasir: Apakah menguntungkan? *JSEP (Journal of Social and Agricultural Economics), 14*(3), 222–235.

Setiawan, A. B., & Prajanti, S. D. W. (2011). Analisis efisiensi penggunaan faktor-faktor produksi usaha tani jagung di Kabupaten Grobogan tahun 2008. *JEJAK: Jurnal Ekonomi dan Kebijakan, 4*(1).

Soekartawi. (2002). *Prinsip dasar ekonomi pertanian* (Edisi revisi). PT Raja Grafindo Perkasa.

Soekartawi. (2006). *Analisis usahatani*. Universitas Indonesia.

Sulastri, E., Wijayanti, N., Wartiningsih, A., & Hartono, Y. (2024). Faktor-faktor yang memengaruhi produksi semangka di Kecamatan Lape, Kabupaten Sumbawa. *Musamus Journal of Agribusiness, 7*(2), 109–117.

Utama, S., & Suyana. (2014). *Buku ajar aplikasi analisis kuantitatif*. Fakultas Ekonomi Universitas Udayana.

Wahyuni, W. S., Rochdiani, D., & Novianty, A. (2022). Analisis pendapatan usahatani semangka di Desa Cikadu Kecamatan Cikalong Kabupaten Tasikmalaya. *Jurnal Ilmiah Mahasiswa AGROINFO GALUH, 9*(1), 32–41.

Wiryanta, T. (2019). Pengembangan komoditas hortikultura di Indonesia. *Jurnal Hortikultura Indonesia, 9*(2), 89–95.

Wulandari, A. A. (2012). *Budidaya tanaman buah semangka (Citrullus lanatus)* [Laporan magang, Pusat Pendidikan dan Pelatihan Pembangunan Masyarakat Desa OISCA].

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.