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Analysis Of Factors Affecting The Income From Siam Orange (*Citrus Nobilis*) Farming Using Semi-Organic Fertilizers In Alebo Village, Konda Subdistrict, South Konawe Regency

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Abstract

This study aims to analyze: (1) The level of income from Siamese orange farming using semi-organic fertilizer in Alebo Village, Konda Subdistrict, South Konawe Regency; (2) How the amount of semi-organic fertilizer, orange production, production costs, and selling price affect income from Siamese orange farming in Alebo Village, Konda Subdistrict, South Konawe Regency. The research location was selected using purposive sampling. The study population consisted of 35 Siamese orange farmers using semi-organic fertilizer, and the entire population was sampled using a census method (*saturation sampling*). The data used consisted of primary and secondary data. Data analysis was performed using farm income analysis and multiple linear regression analysis. The results of the study indicate that the level of Siamese orange farm income among farmers using semi-organic fertilizer in Alebo Village is Rp46,019,420 per farmer per year. The results of the multiple linear regression analysis show that the amount of semi-organic fertilizer, orange production, production costs, and selling price significantly influence Siamese orange farm income. Partially, the variables of orange production and selling price have a significant positive effect on income, while the variables of the amount of semi-organic fertilizer and production costs have a significant negative effect on income.

Keywords: Siamese orange, income, semi-organic fertilizer

INTRODUCTION

Agriculture is one of the key sectors in Indonesia's economic development because it plays a role in food security, employment, and as a source of income for the community,

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particularly in rural areas (Onibala & Sondakh, 2017). In line with the growing concern for environmental sustainability and human health, agricultural development is directed toward systems capable of maintaining productivity while ensuring the sustainability of resources. Sustainable agriculture is characterized not only by increased production but also by fair profits and farmers' ability to choose farming practices suited to their conditions and needs (Sianturi et al., 2016).

One approach that supports sustainable agriculture is the use of organic or semi-organic farming systems. The adoption of organic farming encourages farmers to pay closer attention to environmental conditions through the use of inputs derived from natural materials (Charina et al., 2018). In addition to producing relatively safer and healthier products, the long-term use of organic materials can help maintain soil quality and reduce dependence on chemical inputs (Mayrowani, 2012). However, in practice, some farmers have not yet fully transitioned to organic systems, so the use of organic fertilizers is often combined with inorganic fertilizers as part of a semi-organic farming system.

Siam oranges are a horticultural commodity with relatively high economic value and market demand. The success of their cultivation is influenced by various production factors, one of which is fertilization. Fertilizers play a role in providing nutrients to support plant growth, flowering, and fruit formation. Organic fertilizers can improve the physical, chemical, and biological properties of the soil and increase the efficiency of inorganic fertilizer use. Conversely, excessive use of inorganic fertilizers without balancing them with organic matter can degrade soil quality and reduce soil biological activity (Hartatik et al., 2015). Combining organic and inorganic fertilizers through a semi-organic system is one alternative for maintaining productivity while improving soil conditions. Murnita and Taher (2021) demonstrated that the use of organic and inorganic fertilizers can improve soil chemical properties and support increased crop production, while Saragi et al. (2021) found that the combined use of NPK fertilizer and manure had a significant effect on Siamese orange production.

South Konawe Regency is one of the key areas for Siamese orange cultivation in Southeast Sulawesi Province. According to data from the Southeast Sulawesi Central Statistics Agency, Siamese orange production in South Konawe Regency reached 3,795.40 metric tons in 2023 and increased to 4,921.45 metric tons in 2024. This production level is the highest compared to other regencies and cities in Southeast Sulawesi Province, giving South Konawe Regency a strategic position in the development of Siamese oranges as a commodity (BPS, 2025). This increase in production indicates that Siamese oranges have the potential to be further developed as a source of income for farmers.

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One of the centers for pomelo cultivation in South Konawe Regency is located in Alebo Village, Konda Subdistrict. According to data from the Konda Subdistrict Agricultural Extension Center (2025), Alebo Village has approximately 13 hectares of pomelo orchards with a population of about 5,200 trees. The favorable land potential and agroclimatic conditions make this area ideal for the development of pomelo farming. In practice, farmers in Alebo Village have begun implementing a semi-organic system by combining organic and chemical fertilizers. Organic fertilizers are generally applied periodically to improve soil conditions, while chemical fertilizers are applied at specific stages to support flowering, fruit enlargement, and plant recovery after harvest. However, the still-dominant use of chemical inputs can increase production costs and affect farmers' income levels.

Income is one of the key indicators for assessing the success of a farming operation because it reflects the operation's ability to generate a profit after all production costs have been accounted for. The amount of revenue is influenced by production levels, selling prices, and costs incurred during the production process. Therefore, increases in production and selling prices have the potential to boost revenue, while increases in production costs can reduce farmers' revenue. These conditions highlight the importance of analyzing factors related to the revenue of Siamese orange farming, particularly in the semi-organic system practiced by farmers in Alebo Village.

Previous research has shown that citrus farm income is influenced by various factors. Suprihatiningsih et al. (2024) found that production volume, selling price, and the price of ZA fertilizer had a significant effect on Siamese orange farm income. Pawaruddin et al. (2023) demonstrated that organic rice farming generates profitable income and is worth developing from both financial and environmental perspectives. Meanwhile, Setiadi et al. (2023) found that the number of trees and the age of the plants had a positive and significant effect on the production of sweet Siam honey oranges in Tanea Village, Konda District, whereas fertilizer use did not have a significant effect on production. These findings indicate that the factors influencing production and income may vary depending on the commodity, cultivation system, and conditions of the study area.

Although there have been studies on citrus farm production and income, research specifically analyzing the income from Siamese orange farming using semi-organic fertilizers in Alebo Village remains limited. Previous studies have mostly focused on production factors, business feasibility, or income for different commodities and regions. Therefore, this study was conducted to analyze the income from Siamese orange farming in Alebo Village, Konda Subdistrict, South Konawe Regency, and to examine its relationship with the amount of semi-

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organic fertilizer used, orange production, production costs, and selling prices. The results of this study are expected to provide empirical information for farmers in determining more efficient input use and farming strategies, as well as serve as a basis for government consideration in the development of sustainable Siamese orange farming.

METHOD

This study was conducted in Alebo Village, Konda Subdistrict, South Konawe Regency, Southeast Sulawesi Province, from January to February 2026. The study location was selected through *purposive sampling*, considering that Alebo Village is one of the areas designated for the development of Siamese orange farming and that its farmers have adopted the use of semi-organic fertilizers.

The study population consisted of all Siamese orange farmers in Alebo Village who used semi-organic fertilizers. Based on data from the Konda Subdistrict Agricultural Extension Center (BPP), there were 35 farmers who met these criteria. Because the population size was relatively small, the entire population was sampled using *total sampling*, or a census. Thus, the number of respondents in this study was 35 farmers.

The data used consisted of primary and secondary data. Primary data were obtained through face-to-face interviews with respondents using a questionnaire that included information on farmer characteristics, the use of semi-organic fertilizers, production, selling prices, production costs, and farm income. Secondary data were obtained from the Subdistrict Agricultural Extension Office (BPP) of Konda ( ), the Central Statistics Agency (BPS), and other agencies and sources relevant to the study.

Data collection was conducted through observation, interviews, and documentation. Observations were made by directly observing Siamese orange farming activities at the study site. Interviews were conducted in person with farmers using a questionnaire to obtain the necessary data. Documentation was carried out by recording and collecting documents and supporting data relevant to the study.

Data analysis was conducted to determine the income, profitability, and factors affecting the income of Siamese orange farming. Farm income was calculated using the revenue and expense approach. Net income is calculated as follows (Soekartawi, 2002):

$$\pi = TR - TC$$

Explanation:

π = net income from Siamese orange farming (Rp/year);

TR = total revenue from Siamese orange farming (Rp/year);

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TC = total costs of Siamese orange farming (Rp/year).

Total costs are calculated using the equation:

TC = TFC + TVC

Explanation:

TC = total costs (Rp/year);

TFC = total fixed costs (Rp/year);

TVC = total variable cost (Rp/year).

Total revenue is calculated using the equation:

TR = P × Q

Explanation:

TR = total revenue (Rp/year);

P = selling price of Siam oranges (Rp/kg);

Q = production volume of Siam oranges (kg/year).

The feasibility of the farming operation is analyzed using *the Revenue-to-Cost Ratio* (R/C), which is the ratio of total revenue to total costs, calculated using the following formula:

R/C = TR/TC

The farming operation is considered viable and profitable if R/C > 1, breaks even if R/C = 1, and is unviable or unprofitable if R/C < 1.

To analyze the effects of the amount of semi-organic fertilizer, orange production, production costs, and selling price on Siamese orange farm income, multiple linear regression analysis was used with the following equation:

$$\mathbf{Y = a + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + e}$$

Notes:

Y = Siamese orange farm income (Rp/year);

a = constant;

β_1–β_4 = regression coefficients;

X_1 = amount of semi-organic fertilizer (kg);

X_2 = Siamese orange production (kg/year);

X_3 = production costs (Rp/year);

X_4 = selling price (Rp/kg);

e = error term.

Hypothesis testing was conducted using the F-test to determine the simultaneous effect of the independent variables and the t-test to determine the partial effect of each independent variable on farm income. The coefficient of determination (R^2) was used to determine the

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amount of variation in income that could be explained by the independent variables in the model. Before the regression analysis was performed, the model was tested using classical assumption tests, including normality, multicollinearity, and heteroscedasticity, to ensure the validity of the regression model. All data analysis was performed using the *Statistical Package for the Social Sciences* (SPSS) version 27 *for Windows*.

RESULTS AND DISCUSSION

Characteristics of Siam Orange Farming

The characteristics of farming operations describe the use of various factors of production employed by farmers in Siamese orange cultivation in Alebo Village. The factors of production observed include fertilizers, pesticides, and herbicides, as well as labor.

Table 1. Use of Production Factors in Siamese Orange Farming in Alebo Village, Konda Subdistrict, South Konawe Regency

Production Factors	Unit	Highest	Lowest	Average	Quantity
Organic fertilizer	kg/year	5,000	900	1,449	50,700
Inorganic fertilizer	kg/year	1,550	50	478	16,742
Pesticides	L/year	5	0.1	0.85	29.75
Herbicide	L/year	5	1	0.34	12
Fertilization labor	people	—	—	1.89	66
Maintenance staff	people	—	—	1.49	52
Harvest workers	people	—	—	2.74	96
Total workforce	people	—	—	6.12	214

Based on Table 1, the use of organic fertilizer is higher than that of inorganic fertilizer. The total amount of organic fertilizer used reached 50,700 kg/year, with an average of 1,449 kg/farmer/year, while inorganic fertilizer use reached 16,742 kg/year, with an average of 478 kg/farmer/year. The organic fertilizer used is manure, while the inorganic fertilizers consist of urea, NPK Phonska, NPK Mutiara, dolomite, Gandasil B, and Gandasil D. The combination of these two types of fertilizer indicates the implementation of a semi-organic fertilization system in Siamese orange farming in Alebo Village.

The higher use of organic fertilizers indicates that farmers rely heavily on manure to maintain soil conditions. Organic fertilizers play a role in improving the physical, chemical, and biological properties of the soil, while inorganic fertilizers are used to meet the need for

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nutrients that are more readily available to plants (Sutanto, 2002). These conditions show that farmers have not completely abandoned chemical fertilizers but combine them with organic fertilizers according to the plants' needs.

Pesticide use reached 29.75 liters per year, with an average of 0.85 liters per farmer per year, while herbicide use reached 12 liters per year, with an average of 0.34 liters per farmer per year. Pesticide use is higher than herbicide use because, based on interview results, farmers face pest and disease outbreaks more frequently, while weeds are still largely controlled manually. The types of pesticides used include Alika, Sidametrin, Cypermax, Biowasil, Fostin, Winder, Starban, Tuntas, and Amistar Top, while the herbicides used include Polado, Bitop, and Gramaxone.

The greatest labor input is required for harvesting, involving 96 workers with an average of 2.74 workers per farmer, while fertilization requires 66 workers with an average of 1.89 workers per farmer, and maintenance requires 52 workers with an average of 1.49 workers per farmer. The high labor requirements for harvesting are due to the need for picking, gathering, simple sorting, and transportation— —to be completed within a relatively short time. Meanwhile, maintenance activities can be carried out gradually, resulting in relatively lower labor requirements.

Overall, the use of production factors indicates that Siamese orange farming in Alebo Village still relies on fertilizer and labor as the main components of production activities. This situation is reflected in the cost structure of the farming operations.

Income from Siamese Orange Farming

Farm income was analyzed based on fixed costs, variable costs, total production costs, receipts, revenue, and farm viability. All of these components are summarized in Table 2 and Table 2.

Table 2. Cost Structure of Siamese Orange Farming in Alebo Village, Konda Subdistrict, South Konawe Regency

Cost Components	Highest (Rp/year)	Lowest (Rp/year)	Average (Rp/year)	Total (Rp/year)
Equipment depreciation	1,173,000	216,000	457,394	16,008,783
Land tax	60,000	22,000	36,086	1,263,000
Total fixed costs	1,228,000	252,000	493,480	17,271,783
Fertilizer	7,450,000	616,000	2,034,100	71,193,500

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Pesticides and herbicides	1,200,000	40,000	183,857	6,435,000
Workforce	1,770,000	295,000	612,000	21,420,000
Total variable costs	9,900,000	1,025,000	2,829,957	99,048,500
Total production costs	11,128,000	1,277,000	3,323,437	116,320,283

Based on Table 2, the total production cost for Siamese orange farming reaches Rp116,320,283 per year, with an average of Rp3,323,437 per farmer per year. These costs consist of fixed costs of Rp17,271,783 per year and variable costs of Rp99,048,500 per year. Thus, variable costs account for approximately 85.15% of total production costs, while fixed costs account for 14.85%.

Among fixed costs, equipment depreciation is the largest component, averaging Rp457,394 per farmer per year, while the average land tax is only Rp36,086 per farmer per year. This indicates that fixed costs stem more from the use of production equipment than from land taxes.

Among variable costs, fertilizer is the largest expenditure component, averaging Rp2,034,100 per farmer per year, or about 71.9% of total variable costs. The dominance of fertilizer costs is related to the simultaneous use of organic and inorganic fertilizers in a semi-organic system. This finding is consistent with Wijaya et al. (2015), who found that fertilizer costs were the main component of variable costs in semi-organic Siamese orange farming.

Labor costs were the second-largest component, averaging Rp612,000 per farmer per year, while pesticide and herbicide costs totaled Rp183,857 per farmer per year. This cost structure indicates that controlling fertilizer and labor costs is a critical aspect of improving the efficiency of Siamese orange farming in Alebo Village.

Table 3. Revenue, Income, and Viability of Siamese Orange Farming in Alebo Village, Konda Subdistrict, South Konawe Regency

Indicator	Highest	Lowest	Average/Farmer/Year	Total
Production (kg/year)	18,000	2,000	6,363	222,700
Selling price (Rp/kg)	8,500	7,000	7,829	—
Revenue (Rp/year)	135,000,000	16,000,000	49,342,857	1,727,000,000
Production costs (Rp/year)	11,128,000	1,277,000	3,323,437	116,320,283
Income (Rp/year)	123,872,000	13,605,500	46,019,420	1,610,679,717

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R/C	—	—	14.85	—

Based on Table 3, total Siamese orange production reached 222,700 kg/year, with an average of 6,363 kg/farmer/year. The average selling price received by farmers was Rp7,829/kg, resulting in average revenue of Rp49,342,857 per farmer per year. After deducting production costs of Rp3,323,437 per farmer per year, the average income was Rp46,019,420 per farmer per year.

Differences in revenue among farmers are primarily due to variations in production, while selling prices remain within a relatively narrow range. Production is the primary determinant of revenue because revenue is the product of production and selling price. This finding aligns with Suprihatiningsih et al. (2024), who demonstrated that production and selling price are key factors in determining the income from Siamese orange farming.

Income levels are also supported by production costs that are relatively low compared to revenue. These results indicate that Siamese orange farming in Alebo Village is capable of generating substantial profits. Although all respondents used semi-organic fertilizer, differences in income among farmers are still influenced by farm scale, production, input use, and selling price.

The R/C ratio obtained was 14.85. This means that for every Rp1.00 in costs incurred, revenue of Rp14.85 is generated. Since the R/C ratio is greater than 1, Siamese orange farming in Alebo Village is deemed viable and financially profitable. This value is higher than the result of Rohman's (2022) study, which yielded an R/C of 4.51. This difference may be due to variations in productivity, selling prices, cost structures, and farming characteristics across the respective study areas.

Factors Affecting Siam Orange Farming Income

Multiple linear regression analysis was used to determine the effects of the amount of semi-organic fertilizer, orange production, production costs, and selling price on income. Before hypothesis testing was conducted, the model was tested using classical assumptions.

Table 4. Summary of Classical Assumption Test Results

Test	Indicator	Result	Criteria	Notes
Normality	Shapiro-Wilk	0.974	—	Normal
	Sig.	0.559	> 0.05	Met
	Fertilizer Amount – Tolerance	0.239	> 0.10	Met

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Multicollinearity	Amount of Fertilizer – VIF	4.180	< 10	Met
	Production – Tolerance	0.344	> 0.10	Met
	Production – VIF	2.909	< 10	Met
	Production Costs – Tolerance	0.248	> 0.10	Met
	Production cost – VIF	4.032	< 10	Met
	Selling price – Tolerance	0.857	> 0.10	Met
	Selling price – VIF	1.167	< 10	Met

Based on Table 4, the Shapiro-Wilk significance value of 0.559 > 0.05, indicating that the residuals are normally distributed. All independent variables have *tolerance* values > 0.10 and VIF values < 10, indicating that there is no multicollinearity. The scatterplot results also show that the residual points are randomly distributed around the zero line and do not form a specific pattern ( ), indicating that the model shows no signs of heteroscedasticity. Thus, the regression model satisfies the classical assumptions and can be used for further testing.

Table 5. Results of Multiple Linear Regression Analysis and Hypothesis Testing

Variable	Coefficient B	t-value	Sig.	Notes
Constant	-34,946,244	—	0.001	—
Amount of semi-organic fertilizer	-858,751	-2,429	0.021	Negative and significant
Siam orange production	7,785,110	93,643	0.001	Positive and significant
Production cost	-0.746	-4.031	0.001	Negative and significant
Selling price	4,544.725	8,362	0.001	Positive and significant
R-squared	0.999	—	—	—
Adjusted R-squared	0.998	—	—	—
F-calculated	5,392.311	—	0.001	Significant

The resulting regression equation is:

$$\mathbf{Y = -34{,}946{,}244 - 858.751X_1 + 7{,}785.110X_2 - 0.746X_3 + 4{,}544.725X_4}$$

The *adjusted R-squared* value of 0.998 indicates that 99.8% of the variation in income can be explained by the amount of semi-organic fertilizer, Siam orange production, production costs, and selling price, while 0.2% is explained by other factors outside the model.

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The calculated F-value of 5,392.311 is greater than the table F-value of 2.690, with a significance level of 0.001 < 0.05. Thus, all independent variables simultaneously have a significant effect on Siamese orange farm income.

Partially, the amount of semi-organic fertilizer has a negative and significant effect on income with a coefficient of -858.751 and a significance level of 0.021. This means that an increase in fertilizer use that is not accompanied by a proportional increase in production can result in higher costs than the additional revenue generated. This condition highlights the importance of using fertilizer efficiently and in accordance with the plants' needs.

Siamese orange production has a positive and significant effect on income, with a coefficient of 7,785.110 and a significance level of 0.001. These findings indicate that increased production will boost revenue and ultimately increase farmers' income. These results are consistent with those of Suprihatiningsih et al. (2024) and Rohman (2022), , which show that production is one of the key factors in determining income from citrus farming.

Production costs have a negative and significant effect on income, with a coefficient of -0.746 and a significance level of 0.001. An increase in production costs will reduce income if it is not offset by a commensurate increase in revenue. This finding is consistent with Rohman (2022) and Pawaruddin et al. (2023), who showed that rising production costs can reduce farm profits.

The selling price has a positive and significant effect on income, with a coefficient of 4,544.725 and a p-value of 0.001. The higher the selling price received by farmers, the greater their revenue and income. This finding is consistent with Muzdalifah and Antriyandarti (2023), who demonstrated a positive effect of selling price on the income of orange farmers.

Overall, the research findings indicate that income from pomelo farming in Alebo Village is primarily determined by farmers' ability to achieve high yields, secure favorable selling prices, and control production costs. Meanwhile, the use of semi-organic fertilizers should be managed efficiently to ensure that increased inputs do not actually reduce farmers' income.

CONCLUSION

Siamese orange farming using a semi-organic fertilization system in Alebo Village, Konda Subdistrict, South Konawe Regency, generates an average income of Rp46,019,420 per farmer per year. The analysis results show that the amount of semi-organic fertilizer and production costs have a significant negative effect on income, while Siamese orange production and selling price have a significant positive effect on income. These findings indicate that increasing farmers' income can primarily be achieved through increased production and better selling prices, accompanied by the efficient use of inputs.

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Farmers are advised to increase the productivity of Siamese oranges through optimal crop management and the appropriate use of fertilizers according to the plants' needs so that production costs can be controlled. The government and relevant agencies need to strengthen extension services regarding fertilizer efficiency, cultivation techniques, and market access that can improve farmers' bargaining power. This study was limited to 35 farmers and the variables analyzed; therefore, future research is advised to consider other factors such as land area, the number of productive plants, labor, and market access, as well as to expand the geographical scope of the study.

REFERENCE

Alitawan, A. A. I., & Sutrisna, I. K. (2017). Faktor-faktor yang mempengaruhi pendapatan petani jeruk pada Desa Gunung Bau Kecamatan Kintamani Kabupaten Bangli. *E-Jurnal Ekonomi Pembangunan Universitas Udayana, 6*(5).

Badan Pusat Statistik. (2025). *Provinsi Sulawesi Tenggara dalam Angka 2024*.

Busyra, R. G. (2022). Dampak penggunaan jenis pupuk terhadap pendapatan petani padi sawah di Kabupaten Batanghari. *Jurnal MeA (Media Agribisnis), 7*(2), 124.

Charina, A., Andriani, R., Kusumo, B., Sadeli, A. H., & Deliana, Y. (2018). Faktor-faktor yang mempengaruhi petani dalam menerapkan Standar Operasional Prosedur (SOP) sistem pertanian organik di Kabupaten Bandung Barat. *Jurnal Penyuluhan, 14*(1), 68–78.

Djojosumarto, P. (2008). *Pestisida dan Aplikasinya*. Jakarta: Agromedia Pustaka.

Ghozali. (2021). *Aplikasi Analisis Multivariete dengan Program IBM SPSS 26*. Semarang: Badan Penerbit Universitas Diponegoro.

Gufron, D. R., Inayah, T., & Junaidi. (2021). Perbandingan pendapatan usahatani padi organik dan padi anorganik di Desa Watukebo, Kecamatan Blimbingsari Kabupaten Banyuwangi. *Sharia Agribusiness Journal, 1*(2).

Hartatik, W., Husnain, H., & Widowati, L. R. (2015). Peranan pupuk organik dalam peningkatan produktivitas tanah dan tanaman. *Jurnal Sumberdaya Lahan, 9*(2), 107–120.

Hildayanti, S. K., Mulyana, A., Sriati, & Gofar, N. (2013). Pendapatan petani padi sawah pengguna pupuk organik dan anorganik di Kabupaten Ogan Komering Ulu Timur. *AGRISEP, 12*(2), 195–208.

Ibrahim, R., Halid, A., & Boekoesoe, Y. (2021). Analisis biaya dan pendapatan usahatani padi sawah non irigasi teknis di Kelurahan Tenilo Kecamatan Limboto Kabupaten Gorontalo. *AGRINESIA: Jurnal Ilmiah Agribisnis, 5*(3), 40.

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Kementerian Pertanian. (2021). Kementan paparkan dampak negatif penggunaan pupuk kimia berlebihan. *ANTARA News*.

Kurniawati, N., Suparmin, & Amiruddin. (2021). Analisis struktur biaya dan pendapatan usahatani jagung hibrida di Kecamatan Jerowaru Kabupaten Lombok Timur. *Agroteksos, 31*(2), 84–92.

Lingga, P., & Marsono. (2013). *Petunjuk Penggunaan Pupuk* (Edisi revisi). Jakarta: Penebar Swadaya.

Mayrowani, H. (2012). The development of organic agriculture in Indonesia. *Forum Penelitian Agro Ekonomi, 30*(2), 91–108.

Murnita, M., & Taher, Y. A. (2021). Dampak pupuk organik dan anorganik terhadap perubahan sifat kimia tanah dan produksi tanaman padi (*Oryza sativa* L.). *Menara Ilmu, 15*(2).

Muzdalifah, H., & Antriyandarti, E. (2023). Analisis faktor-faktor yang mempengaruhi pendapatan petani jeruk pamelo di Kabupaten Pati. *AGROMIX, 14*(1), 90–95.

Mustofa, M. F., & Kurniawan, D. (2024). Analisis pendapatan usaha tani jeruk siam (*Citrus nobilis* Lour Var) di Desa Gambirono Kecamatan Bangsalsari Kabupaten Jember. *Jurnal KUBIS, 4*(2), 115–125.

Onibala, A. G., & Sondakh, M. L. (2017). Analisis faktor-faktor yang mempengaruhi produksi padi sawah di Kelurahan Koya, Kecamatan Tondano Selatan. *Agri-Sosioekonomi, 13*(2A), 237–242.

Pawaruddin, P., Maryam, M., Talib, N., & Ambar, A. A. (2023). Analisis pendapatan usaha tani padi organik di Kelompok Tani Massumpuloloe I Kecamatan Panca Rijang. *National Multidisciplinary Sciences, 2*(3), 141–145.

Rachmanto, A., Lestari, S., & Mulyani, A. (2026). Efisiensi teknis usahatani mina padi dan padi konvensional di Desa Panembangan, Kabupaten Banyumas, Provinsi Jawa Tengah. *Mimbar Agribisnis, 12*(1), 276–289.

Rohman, Y. Nur. (2022). Analisis pendapatan usahatani jeruk siam di Desa Sidomekar Kecamatan Semboro Kabupaten Jember.

Rosadi, A. H. Y. (2015). Kebijakan pemupukan berimbang untuk meningkatkan ketersediaan pangan nasional. *Jurnal Pangan, 24*(1), 1–14.

Saragi, C. P. H., Simbolon, R., & Tarigan, P. C. (2021). Analisis faktor-faktor yang mempengaruhi produksi dan pendapatan petani jeruk siam di Desa Sukajulu Kecamatan Barusjahe Kabupaten Karo. *Jurnal Agriust, 1*(2), 59–64.

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Setiadi, A., Gafaruddin, A., & Slamet, A. (2023). Faktor-faktor yang mempengaruhi produksi usahatani jeruk manis siam madu (*Citrus sinensis nobilis*) di Desa Tanea Kecamatan Konda Kabupaten Konawe Selatan. *Jurnal Ilmiah Membangun Desa dan Pertanian, 8*(3), 88–95.

Sianturi, S. A. E., Kernalis, E., & A. (2016). Analisis produktivitas usahatani padi sawah di Kecamatan Berbak Kabupaten Tanjung Jabung Timur. *Sosio-Ekonomika Bisnis, 17*(2), 1–13.

Soekartawi. (2002). *Analisis Usahatani*. Jakarta: Universitas Indonesia.

Soekartawi. (2006). *Analisis Usahatani*. Jakarta: Universitas Indonesia.

Sugiyono. (2023). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung: Alfabeta.

Suprihatiningsih, S., Windani, I., & Hasanah, U. (2024). Faktor-faktor yang mempengaruhi produksi dan pendapatan usahatani jeruk siam di Desa Pucangagung Kecamatan Bayan Kabupaten Purworejo. *Surya Agritama, 13*(2).

Sutanto, R. (2002). *Penerapan Pertanian Organik: Pemasyarakatan dan Pengembangannya*. Yogyakarta: Kanisius.

Wijaya, N. T. A., Dewi, R. K., & Ustriyana, N. G. (2015). Kontribusi usahatani jeruk siam (*Citrus nobilis*) terhadap pendapatan rumah tangga di Poktan Gunung Mekar, Desa Taro, Kecamatan Tegallalang, Kabupaten Gianyar. *E-Jurnal Agribisnis dan Agrowisata, 4*(2), 117–125.

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