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The Contribution of Rambutan Farming Income to Farmers' Income in Jati Bali Village, Ranomeeto Subdistrict, South Konawe Regency

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Abstract

This study was motivated by the importance of the agricultural sector as the primary source of income for rural communities, particularly through horticultural farming activities such as rambutan cultivation. Although the rambutan crop has considerable economic potential, its contribution to the total income of farmers in Jati Bali Village, Ranomeeto Subdistrict, South Konawe Regency, has not yet been precisely determined. The objective of this study is to analyze the extent of the contribution of rambutan farming in Jati Bali Village, Ranomeeto Subdistrict, South Konawe Regency. This study employed a qualitative descriptive analysis method. The data used in this study consisted of primary data obtained through direct interviews with rambutan farmer respondents, as well as secondary data obtained from relevant agencies. Sampling was conducted via a census of all rambutan farmers, totaling 10 individuals. The data analysis included income analysis and contribution analysis. The results of this study indicate that the average annual income from rambutan farming is Rp5,674,550, with total annual household income for farmers amounting to Rp32,592,883. The contribution of rambutan farming is 17.41%, which is considered small and serves only as a supplementary source of income.

Keyword: ***Contribution, Income, Rambutan Farming***

INTRODUCTION

The agricultural sector remains one of the main pillars of the Indonesian economy because it plays a role in food security, job creation, and improving the welfare of rural communities (Jumriani, 2019; Yurizky, 2024). One horticultural commodity with significant economic potential is rambutan (*Nephelium lappaceum*). This tropical fruit can thrive in various

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soil types and agroclimatic conditions across Indonesia, particularly in areas with adequate rainfall. Rambutan is rich in vitamins, minerals, and fiber, making it an important fruit for meeting the nutritional needs of the population. From an economic perspective, rambutan offers favorable market prospects and can be cultivated by small-scale farmers as a source of household income. However, the success of rambutan farming is not determined solely by natural conditions but is also influenced by farmers' ability to manage production factors such as the use of seedlings, fertilizers, labor, and crop maintenance techniques (Arinai, 2016; Ariza, 2022).

In practice, most farming operations in Indonesia are still managed on a small scale, with limited capital, productive assets, access to technology, and bargaining power in the market. These conditions mean that farmers' productivity and income have not yet developed optimally, so farming activities often only suffice to meet daily living needs (Kuheba, 2016). Yet, increasing farmers' income is one of the key indicators of successful agricultural sector development. The level of farmers' income is influenced by the efficient use of production factors, land productivity, climatic conditions, and fluctuations in agricultural commodity prices (Bongkang et al., 2019). Therefore, a study is needed on the contribution of a particular commodity to farmers' income to determine the extent to which that commodity plays a role in improving the well-being of farming households.

South Konawe Regency is one of the horticultural production centers in Southeast Sulawesi Province, possessing significant potential for fruit crop development. Data from the Southeast Sulawesi Provincial Central Statistics Agency indicate that in 2024, annual fruit crop production in South Konawe Regency reached 23,765 metric tons, with a harvested area of 84,243 hectares. Specifically, rambutan production in 2023 reached 70,465 quintals, with 181,559 bearing trees. These figures indicate that rambutan is a fruit commodity with considerable potential for development as a source of income for rural communities.

One of the rambutan-producing areas in South Konawe Regency is Jati Bali Village, Ranomeeto Subdistrict. Some villagers rely on rambutan farming for their household income. However, to date, there is no empirical information available regarding the extent to which rambutan farming contributes to farmers' total income. The lack of such information means there is no solid basis for local governments, agricultural extension workers, or farmer groups to formulate strategies for developing rambutan as a means to improve farmers' welfare.

Several previous studies have highlighted the importance of analyzing income contributions across various economic sectors. Isma (2023) found that the presence of the Puncak Lakude Tourist Attraction contributed 67.67% to the income of corn farmers in Masalili

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Village. Ainun Jariyah (2022) reported that the income contribution of female itinerant vegetable vendors to household economies in Masagena Village reached 63.91%. Meanwhile, M. Taufik Darmayanto D. (2020) showed that the contribution of female weavers to the household income of fishing families in Wabula Village was 6%. These research findings demonstrate that analyzing the contribution of income can provide insight into the role of a particular economic activity in household well-being.

Nevertheless, previous studies have primarily focused on the contributions of the tourism sector, trade, and non-agricultural employment to household income. Research specifically analyzing the contribution of rambutan farming to farmers' income—particularly at the village level in South Konawe Regency—remains very limited. In fact, the characteristics of horticultural commodities—particularly rambutan—involve distinct production patterns, harvest seasons, and cost structures compared to other agricultural commodities, necessitating a separate study. This situation highlights a research gap: there remains a scarcity of scientific information regarding the extent of rambutan farming's contribution to farmers' income in its primary production areas.

Based on this description, this study is important to conduct with the aim of analyzing the contribution of rambutan farming to farmers' income in Jati Bali Village, Ranomeeto Subdistrict, South Konawe Regency. The research results are expected to serve as a source of information for local governments, agricultural extension workers, and farmers in formulating strategies for more productive and sustainable rambutan farming. Furthermore, this study is expected to enrich the literature in the field of horticultural agribusiness, particularly regarding the contribution of fruit commodities to increasing farmers' income and well-being in rural areas.

METHOD

This study was conducted in Jati Bali Village, Ranomeeto Subdistrict, South Konawe Regency, Southeast Sulawesi Province, from September 2025 to April 2026. The research location was selected through purposive sampling because the village is one of the centers of rambutan farming that serves as a source of income for the community. The study population consisted of all rambutan farmers actively engaged in cultivation and the sale of their harvest, totaling 10 individuals. Because the population size was relatively small, a census method was used for sampling, meaning the entire population served as the respondents. The data used included primary data obtained through observation and interviews using a questionnaire, as well as secondary data obtained from literature, documents, and relevant agencies. All data

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were collected through observation, interviews, and documentation to obtain comprehensive information in line with the research objectives.

Data analysis in this study was conducted using quantitative descriptive methods with the aid of Microsoft Excel to process and analyze data regarding the contribution of rambutan farming to farmers' income in Jati Bali Village, Ranomeeto Subdistrict, South Konawe Regency. The analyses included analyses of revenue, total costs, and farming income

RESULTS AND DISCUSSION

Analysis of the Contribution of Rambutan Crop Yields to Farmers' Income

An analysis of the contribution of rambutan crop yields to farmers' income was conducted to determine the extent to which rambutan farming supports farmers' household income. This contribution can be seen by comparing the income derived from rambutan farming with the total income received by farmers from various business sources.

Table 1 Rambutan Farming in , Jati Bali

Variable	Cost Type	Average Cost (Rp/year)
Total Cost	Fixed Costs	199,200
	Variable Costs	531,250
	Total Cost	730,450
Variable	**Revenue**	**Amount (Rp/year)**
Average Revenue	Lowest	2,800,000
	Highest	11,900,000
	Average	7,350,000
Variable	**Income**	**Amount (Rp/year)**
Income	Lowest	2,240,000
	Highest	10,760,000
	Average	6,500,000

Based on Table 1 above, the total costs, average revenue, and income from rambutan farming in Jati Bali Village can be explained as follows:

1. The average total production cost for rambutan farming in Jati Bali Village is Rp730,450 per harvest season, consisting of fixed costs of Rp199,200 and variable costs of Rp531,250. Variable costs are dominated by expenditures on NPK fertilizer, manure, pesticides, and labor, while fixed costs stem from the depreciation of agricultural equipment. These results align with

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the findings of Sardianti et al. (2023), who stated that variable costs are influenced by the volume of production, making them the most critical cost component in farming activities. Furthermore, these findings are consistent with Firnawati's research, which noted that farming production costs consist of fixed and variable costs, where fixed costs are not affected by production volume, while variable costs fluctuate in line with production activities.

2. The average annual income for rambutan farmers in the high-income category reached Rp11,900,000, while in the low-income category it was Rp2,800,000, with an overall average of Rp7,350,000 per year. This difference indicates a significant income disparity among farmers. This variation in income is influenced by several factors, such as the area of land cultivated, the number of productive rambutan trees, and farm management practices, including fertilization, pruning, and pest and disease control. These findings are consistent with those of Kunuti et al. (2020), who stated that land area affects farmers' production and income; the larger the land area owned, the higher the production, and consequently, farmers' income also tends to increase.

3. The income of rambutan farmers in Jati Bali Village ranges from Rp2,240,000 to Rp10,760,000 per year, with an average of Rp6,500,000 per year. This income is derived from the difference between total revenue and total production costs, which include fixed and variable costs over a single harvest season. Differences in income levels among farmers are influenced by several factors, such as land area, tree age, soil fertility, and climatic conditions that affect rambutan tree productivity. Trees in their productive stage that are well-managed generally yield higher production, thereby increasing farmers' income. These findings align with the views of Wijayanti and Saefuddin (2012), who state that farm income is the primary objective of production activities because it determines farmers' ability to meet household needs while also serving as a source of capital for the sustainability of farming operations.

Analysis of Other Farming Incomes

Rambutan farmers in Jati Bali Village derive income not only from rambutan cultivation but also from other agricultural activities such as rice farming, corn farming, and livestock raising. These other farming activities are carried out as additional sources of household income. This indicates that farming activities play a role in increasing income and supporting the fulfillment of farmers' household economic needs. Generally, the more types of crops farmers cultivate, the greater the income they earn to meet their household needs.

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Table 2. Rice Farming in Jati Bali Village

Variable	Type of Cost	Average Cost (Rp/year)
Total Costs	Fixed Costs	1,370,400
	Variable Costs	1,007,500
	Total Costs	2,377,900
Variable	**Revenue**	**Amount (Rp/year)**
Average Revenue	Lowest	20,000,000
	Highest	30,000,000
	Average	25,000,000
Variable	**Income**	**Amount (Rp/year)**
Income	Lowest	15,161,000
	Highest	25,225,000
	Average	20,193,000

Based on Table 2 above, the total costs, average revenue, and income from irrigated rice farming in Jati Bali Village can be explained as follows

1. The average production costs for irrigated rice farming in Jati Bali Village consist of fixed costs of Rp1,370,400 per hectare and variable costs of Rp2,377,900 per growing season. Fixed costs are dominated by tractor rental fees for land preparation, while variable costs include expenditures on seeds, fertilizers, pesticides, and labor. The use of urea and NPK fertilizers is a key cost component because they meet the plants' nutrient needs, thereby enhancing rice growth and production. This aligns with the findings of Syifa et al. (2020), who stated that fertilizer application plays a crucial role in tiller formation, flowering, and grain filling, thus directly influencing crop yield. The magnitude of variable costs indicates that the need for production inputs and labor constitutes the largest expenditure component in irrigated rice farming compared to fixed costs.
2. Income from irrigated rice farming in Jati Bali Village ranges from Rp20,000,000 to Rp30,000,000 per year, with an average of Rp25,000,000 per year. Differences in income levels among farmers are influenced by several factors, including land area, crop productivity, the use of production inputs such as seeds, fertilizers, pesticides, and labor, as well as farmers' ability to apply cultivation techniques. Additionally, pest and disease outbreaks are factors that affect crop yields, thereby impacting farmers' income. These findings are supported by Kawengian et al. (2019), who state that pest and disease control through pesticide spraying is a crucial component of rice crop management to maintain production and increase farm income.

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3. Income from irrigated rice farming in Jati Bali Village ranges from Rp15,161,000 to Rp25,225,000 per year, with an average of Rp20,193,000 per year. This income represents the difference between total revenue and total production costs incurred during a single growing season. Differences in income among farmers are influenced by variations in revenue, production costs, efficiency in input use, as well as land conditions and farm management. Farmers who are able to use high-quality seeds, apply appropriate fertilization, and effectively control pests and diseases tend to earn higher incomes. These research findings are consistent with Saranani (2020), who states that the level of income reflects farmers' success in managing their farms, where income levels are heavily influenced by the amount of revenue and the efficiency of production costs.

Table 3. Corn Farming in Jati Bali Village

Variables	**Cost Type**	**Average Cost (Rp/year)**
Total Costs	Fixed Costs	141,200
	Variable Costs	169,500
	Total Costs	310,700
Variable	**Revenue**	**Amount (Rp/year)**
Average Revenue	Lowest	22,000,000
	Highest	27,500,000
	Average	24,750,000
Variable	**Income**	**Amount (Rp/year)**
Income	Lowest	20,569,000
	Highest	26,662,000
	Average	23,615,500

Based on Table 3 above, the total costs, average revenue, and income from corn farming in Jati Bali Village can be explained as follows

1. The average total cost of corn farming in Jati Bali Village is Rp310,700 per hectare per growing season, consisting of fixed costs of Rp141,200 and variable costs of Rp169,500. Fixed costs stem from the depreciation of farming tools such as hoes, sprayers, and sickles, with sprayer costs being the largest component because they are used multiple times for spraying activities. Meanwhile, variable costs are dominated by fertilizer expenditures, while seed costs are not incurred because most farmers use government-provided seeds. The significant amount of fertilizer costs highlights the importance of meeting nutrient requirements to support the

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growth and productivity of corn crops. Overall, these total costs represent the accumulation of all expenditures throughout the cultivation process and are one of the factors influencing farmers' income levels.

2. Average income from corn farming in Jati Bali Village ranges from Rp22,000,000 to Rp27,500,000 per year, with an average of Rp24,750,000 per year. This income is calculated by multiplying the amount of corn produced by the selling price received by farmers, before deducting production costs. Differences in income levels among farmers are influenced by variations in production volume, land area, use of production inputs, cultivation techniques, and environmental conditions such as soil fertility and water availability. These findings are consistent with Ratu et al. (2021), who state that farm income is the product of production volume and the selling price of the product; thus, increases in both production and selling price will affect the amount of farmers' income.

3. Income from corn farming in Jati Bali Village ranges from Rp20,569,000 to Rp26,662,000 per year, with an average of Rp23,615,500 per year. This income is derived from the difference between revenue and total production costs incurred during the farming process. Differences in income levels among farmers are influenced by production volume, selling price, cost efficiency, and farmers' ability to manage their operations. Farmers with higher incomes are generally able to optimize the use of production inputs such as seeds, fertilizers, and pest control, thereby achieving better harvest yields. This is consistent with Soekartawi (1995) as cited in Syafruwardi et al. (2012), who states that farm income is the difference between revenue and production costs incurred during production activities. Additionally, Aruan (2023) notes that the income earned by farmers reflects their capital capacity and the sustainability of their farming operations.

Table 4. Corn Farming in Jati Bali Village

Variables	**Type of Cost**	**Average Cost (Rp/year)**
Total Costs	Fixed Costs	109,767
	Variable Costs	2,028,300
	Total Costs	2,138,067
Variable	**Revenue**	**Amount (Rp/year)**
Average Revenue	Lowest	20,000,000
	Highest	30,000,000
	Average	25,000,000
Variable	**Income**	**Amount (Rp/year)**

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Income	Lowest	16,209,667
	Highest	24,680,000
	Average	20,444,834

Based on Table 4 above, the total costs, average revenue, and income from pig farming in Jati Bali Village can be explained as follows

1. The average total cost of pig farming in Jati Bali Village is Rp2,138,067 per rearing period, consisting of fixed costs of Rp109,767 and variable costs of Rp2,028,300. Fixed costs stem from the depreciation of equipment such as drums, shovels, buckets, and banana-stem cutters, while variable costs are dominated by feed expenses in the form of rice bran and tofu residue. Feed costs constitute the largest component because they significantly influence the growth and development of the livestock and increase as the number of animals and the duration of rearing increase. This situation indicates that variable costs are the primary component in pig farming because they are directly related to rearing activities and production needs.
2. Average revenue from pig farming in Jati Bali Village ranges from Rp20,000,000 to Rp30,000,000 per year, with an average of Rp25,000,000 per year. This income is derived from the sale of an average of 5 adult pigs, calculated based on production volume and selling price. This aligns with Soekartawi (1995), who states that business income is the product of production volume and selling price. Differences in income levels among farmers are influenced by several factors, such as the number of pigs raised, the quality of breeding stock, feed usage, management practices, and market price conditions. Farmers who are able to manage their operations optimally and operate on a larger scale tend to earn higher incomes compared to those with smaller-scale operations.
3. Income from pig farming in Jati Bali Village ranges from Rp16,209,667 to Rp24,680,000 per year, with an average of Rp20,444,834 per year. Differences in income levels among farmers are influenced by several factors, such as the number of pigs raised, feed costs, pig growth, the weight of pigs at the time of sale, market prices, and management practices. Farmers with larger herds, efficient feed utilization, low mortality rates, and good business management tend to earn higher incomes. Conversely, low income can result from a small business scale, high production costs, and unfavorable market conditions. This indicates that the success of a pig farming business is heavily influenced by the farmer's ability to manage production factors and minimize business costs.

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Household Income Analysis

The household income of farmers in Jati Bali Village does not come solely from rambutan cultivation; most farmers in Jati Bali Village also engage in other agricultural activities such as rice paddy farming, corn farming, and pig farming . The results of the analysis of farmers' household income in Jati Bali Village are presented in Table 5.

Table 5. Analysis of Household Income of Rambutan Farmer Respondents in Jati Bali Village

No	Source of Income	Total Value (Rp/year)
1	Rambutan Farming	5,674,550
2	Rice Farming	10,442,100
3	Corn farming	7,114,300
4	Pig Farmers	9,361,933
5	Total	32,592,883

Table 5 shows that the total annual income of farmer respondents in Jati Bali Village is Rp32,592,883, derived from agricultural income consisting of rambutan farming, paddy rice farming, corn farming, and pig farming. Table 4.20 also shows that the highest income is derived from irrigated rice farming at Rp10,442,100 per year, followed by pig farming at Rp9,361,933 per year, corn farming at Rp7,114,300 per year, and finally rambutan farming at Rp5,674,550 per year

Contribution of Rambutan Farming Income

The purpose of the contribution analysis in this study is to determine the extent to which the income level of a particular farming enterprise influences the total household income of farming families in Jati Bali Village. The magnitude of the contribution can be calculated by comparing the profit from a farming enterprise with the total household income and then multiplying by 100%. The rambutan farmer respondents in Jati Bali Village not only engage in rambutan farming but also in paddy rice farming, corn farming, and pig farming. The respective contributions of agricultural and non-agricultural income to the household income of rambutan farmers in Jati Bali Village are shown in Table 6

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Table 6. Average Contribution of Rambutan Farming Income to Household Income in Jati Bali Village

No	Income Source	Total Value (Rp/year)	Percentage (%)
1	Rambutan Farming	5,674,550	17.41
2	Rice Farming	10,442,100	32.04
3	Corn farming	7,114,300	21.83
4	Pig Farmers	9,361,933	28.72
5	Total	32,592,883	100

Based on Table 6, the contribution of rambutan farming income to farmers' household income in Jati Bali Village is 17.41%, indicating that rambutan farming still makes a relatively small contribution and serves primarily as a source of supplemental income. This low contribution is due to a decline in the number of productive rambutan trees—as some trees have been cut down—as well as unstable rambutan prices, particularly during the peak harvest season. These conditions have resulted in relatively low income from rambutan farming, leading some farmers to begin cultivating other crops, such as irrigated rice and corn, which are considered more profitable. According to Soekartawi (1995), the magnitude of a farming sector's contribution reflects the commodity's position within the household income structure, where a low contribution indicates that the commodity has not yet become the farmers' primary source of income.

In addition to rambutan farming, household income for farmers in Jati Bali Village also comes from irrigated rice farming (32.04%), corn farming (21.83%), and pig farming (28.72%). This income comes entirely from the head of the household, while other family members do not yet contribute directly to household income because most wives serve as homemakers and the children are still of school age. This situation indicates that the head of the household plays the primary role in meeting the household's economic needs. These findings align with those of Sumaryanto and Sudaryanto (2005), who noted that in many rural households, income from annual crops often serves only as supplementary income due to the seasonal nature of their production.

These findings were also compared with previous studies, in which Isma (2023) found that a particular business contributed 67.67% to household income, while Ainun Jariyah (2022) found that a vegetable trading business contributed 63.91%. These figures are higher than the contribution of the rambutan farming business in Jati Bali Village because the businesses studied in this research have more regular production activities and operate on a larger scale.

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Meanwhile, a study by M. Taufik Darmayanto (2020) showed a contribution of 6%, which is similar to the findings of this study because it was influenced by a small business scale and relatively simple management practices. Thus, the magnitude of a business's contribution is influenced by the scale of production, the continuity of income, selling prices, and the business management capabilities of the economic actors.

CONCLUSION

Based on the results of this study regarding the contribution of rambutan farming to farmers' income in Jati Bali Village, Ranomeeto Subdistrict, South Konawe Regency, it can be concluded that rambutan farming generates an average annual income of Rp5,674,550. The contribution of rambutan farming to farmers' total household income is relatively small, at 17.41%, meaning that rambutan farming serves only as a supplementary source of income. Nevertheless, rambutan farming remains economically profitable because the average revenue of Rp6,405,000 exceeds the average production cost of Rp730,450.

Based on the research findings, it is recommended that farmers increase the productivity of their rambutan farming operations by implementing better cultivation techniques and optimizing land use. The government is expected to provide support in the form of extension services, training, production input assistance, and strengthening of the marketing system to increase farmers' income. Furthermore, future research should examine the marketing aspects and distribution chain of rambutan to obtain a more comprehensive picture of the factors influencing the income contribution of rambutan farming.

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