

Analysis of Organic Rice Contribution to Farmer Household Income in Andong Village, Boyolali Regency

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Analysis of Organic Rice Contribution to Farmer Household Income in Andong Village, Boyolali Regency

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Abstract. This study aims to determine the income of organic rice farming in Andong Village, Boyolali Regency, and find out how much organic rice farming contributes to household income. The method of determining the location was purposive, sampling was done by random sampling. Data analysis was carried out on-farm income, non-farming income, and the contribution of organic rice farming to family income. The result of this research is that the average cost of organic rice farming is Rp. 5,989,754/ha. Revenue from organic rice farming is 29,250,441/ha. Organic rice farming income is IDR 7,900,959 per farm and 35,240,195/ha. The average income per farmer outside of organic rice farming for one season or 3 months is IDR 4,163,766 per farmer. non-farming income includes livestock, builders, traders, and others. The average farmer is Rp 12,064,725 per farmer for 3 months. The contribution of organic rice farming is 65.49%. and outside organic rice farming contributed 34.51%.

1. Introduction

The agricultural sector in Indonesia is considered important in encouraging national economic development since the agricultural sector has become the savior of the national economy because of its growth which has increased by around 0.26%. The potential for natural resources is large and diverse, indicating that the agricultural sector has bright prospects. The Indonesian population, who mostly work in the agricultural sector, can take advantage of the existing potential to be developed. [1].

The agricultural sector is a sector that has an important role in the nation's economic recovery and long-term economic development. The agricultural sector absorbs the most labor than other sectors. In 2018, the workforce in the agricultural sector amounted to 35,703,074 out of 124,004,950 people who worked [2]. The agricultural sector consists of several sub-sectors, namely the food crops, horticulture, plantation, fishery, livestock, and forestry sub-sectors. The increasing need for food encourages agricultural people to increase crop productivity and develop food diversity. However, people do not realize that the unwise use of inorganic fertilizers and inorganic pesticides will result in changes in the balance so that it harms humans. Based on these conditions, humans are trying to find farming techniques that are safe and good for the environment and humans, so that organic farming systems emerge.

Organic farming is one model of the realization of a sustainable agricultural system to increase long-term production that is sustainable and in harmony with nature. Recognition of the importance of developing organic agriculture has been stated in the Revitalization of Agricultural Development

launched by President Susilo Bambang Yudhoyono in August 2005 [3]. According to [4], organic farming is part of the latest efforts to promote a socially and ecologically sustainable agricultural system. The organic farming system is a holistic system in which production management aims to improve the health of the agroecosystem, including biodiversity, biological cycles, and soil biological activities to optimize crop production. Organic farming is one of the businesses in the agricultural sector whose role cannot be ignored in supporting the national economy.

In addition, organic farming is also very supportive of environmental conservation and can minimize the negative impact of Global warming". One of the most important organic farming businesses, one of which is organic rice farming [5]. According to the National Standardization Agency (2013), organic is a labeling term which states that a product has been produced under organic system standards and is certified by an accredited organic certificate agency. Rice is a food crop that produces rice as a staple food source for most of the population in Indonesia. Just as Andong Village is one of the villages in Andong District, Boyolali Regency has the potential to cultivate rice.

This area has a large potential land, good climatic conditions, as well as human and labor resources that are quite a lot to support farming. Andong Village also has good potential for organic rice cultivation, one of which is the Community Development farmer group. In 2018, the Community Development farmer group in Andong Village, Andong District, Boyolali Regency received an SNI organic certificate from the LESOS organic food certification agency. The development of certified organic agriculture aims to give confidence to consumers there must be a guarantee system.

Certification is a third-party guarantee system that has been regulated in the Minister of Agriculture Regulation No. 64 of 2016. For organic certification in Indonesia, the standard is the Indonesian National Standard (SNI) No. 6729 of 2016, this standard is a revision of the Indonesian National Standard (SNI) 6729 of 2013. Certified organic farming is an innovation for farmers in Andong Village, Andong District, Boyolali Regency. Andong Village, Andong District, Boyolali Regency has the potential for the development of organic agriculture because of high natural resources and fertile agricultural land so that organic plants are one source of farmers' income. The obstacle faced by farmers is to use a lot of labor so that which affects income in organic rice farming. From the description above, it encourages researchers to investigate further about how much income organic rice farmers make and how much organic rice farming contributes to household income in the Bina Lingsunga farmer group, Andong Village, Andong District, Boyolali Regency.

2. Research Methods

The basic method used in this research is descriptive-analytical. The location of this research was determined purposively in the Community Development Farmers Group, Andong Village, Andong District, Boyolali Regency. Data analysis Income Analysis According to [6] income is the difference between revenue (TR) and total cost (TC) and is expressed by the formula: formulated as follows:

$I = TR - TC$ Information

I (Income) = farm income (Rp)

TR (Total Revenue) = total farm revenue (Rp)

TC (Total Cost) = total cost of farming (Rp)

Farming Contribution Analysis

The contribution formula according to [6] To find out the contribution of lowland rice farming, use the formula:

$\text{Contribution} = (\text{Organic Rice Farming Income}) / (\text{Total Family Income}) \times 100\%$

3. Results and Discussion

3.1 Organic Rice Farming Income, Total Cost

The total cost in the production process is the sum of fixed costs with variable costs. Details of the total cost of organic rice farming in the Community Development Farmer Group of Andong Village, Andong District, Boyolali Regency can be seen in the table, below:

Table 1. Details of the total cost of organic rice farming

No	Description	Per Farm (0.34 ha) In Rupiah	Per Hectare (Rp)
1		Fees paid	
	a. Production Facilities	442,181.25	1,300,533.09
	b. Labor Costs Outside the Family	1,562,000.00	4,594,117.65
	c. Fixed Costs	57,190.87	145,636.61
	Total fees paid	2,061,374.12	6,040,287.35
2		Costs that are not taken into account	
	a. Labor Costs in the Family	961,000.00	2,238,235.29
	b. Manure I	458,166.67	1,347,549.02
	c. Manure II	229,083.33	673,774.51
	Total costs not taken into account	1,648,250.00	4,259,558.82
	Total total cost	3,709,624.12	10,299,846.17

Based on the table above, the total cost for organic rice farming with an area of 0.34 ha is IDR 3,709,624.12 and per hectare is IDR 10,299,846.17.

Reception

Farming revenue is the result of selling organic rice prices multiplied by the amount of production. The average production and acceptance of organic rice farming in the Community Development Farmers Group of Andong Village, Andong District, Boyolali Regency can be seen in the following table:

Table 2. The result of selling organic rice prices multiplied by the amount of production

No	Description	Per farm (0.34 ha)	Per Hectare
1	Organic Rice Production Price	4,500/Kg	
2	Total Organic Rice Production (Kg)	2210.03	6500.09
	Total Revenue	9,945,150.00	29,250,441.18

Based on the table above, the total income obtained by farmers for an average area of 0.34 is Rp. 9,945,150.00 and per hectare is Rp. 29,250,441.18.

Income Revenue can be obtained by subtracting the income from the costs paid. It can be seen in table 3. following:

Table 3. Income Revenue can be obtained by subtracting the income from the costs paid

No	Description	Per farm (0.34 ha)	Per Hectare
1	Total Revenue	9,945,150.00	29,250,441.18
2	Total Fees Paid	2,061,374.12	6,040,287.35
	Total Revenue	7,883,775.88	23,210,153.83

Based on the table above, it can be concluded that the income received by farmers with an average area of 0.34 ha is Rp. 7,900,959.13 and per hectare is Rp. 35,240. 195.44

3.2 Income Outside Organic Rice Farming

3.2.1 Cattle Livestock

Cattle Livestock is a group of animals that are kept and cultivated by humans to support other life needs. The number of livestock in this study is the entire livestock that is cultivated by farmers in the Community Development Farmer Group, Andong Village, Andong District, Boyolali Regency. The average cattle ownership is 2 cows/farmer.

Income is obtained from total revenue minus the total costs incurred for 3 months of raising cattle. The amount of livestock income is influenced by the amount of revenue and costs incurred by farmers in the Community Development Farmer Group, Andong Village, Andong District, Boyolali Regency, which can be seen in the following table:

Table 4. Income is obtained from total revenue minus the total costs incurred for 3 months of raising cattle

No	Description	Per 2 cows	Per cow
1.	Total Revenue	31,800,000.00	20,739,130.43
2.	Total Fees Paid	30,768,066.67	20,066,130.43
	Total income	1,031,933.33	637,000.00

Based on the table above, it can be seen that the income received by farmers in the Community Development Farmers Group in Andong Village, Andong District, Boyolali Regency for 3 months is Rp. 1,031,933.33 per 2 cows of cattle and for each cow, the income is Rp. 637,000.00. Farmers in the Community Development Farmers Group, Andong Village, Andong District, Boyolali Regency, in addition to having a main job as farmers, also have side jobs, namely as builders, traders, and others. This is done to increase the household income of farmers. the following table of respondent farmer income:

Total income outside of organic rice farming in this study is all income received by respondents within one season of organic rice planting in the Community Development Farmers Group, Andong Village, Andong District, Boyolali Regency, and expressed in rupiah. The following table shows the average total household income:

Table 5. Total income outside of organic rice farming in this study
Amount (Rp)

No	Source of Income	Income per month	Income for 3 months	Percentage
1.	Livestock Income	343,977.77	1,031,933.33	24.78%
2.	Side Income	1,043,944.45	3,131,833.33	75.22%
	Total	1,387,922.22	4,163,766.66	100%

Based on the table above, it is known that the total income outside of farming for one month is Rp. 1,387,922.22, so the income outside of farming for 3 months is Rp. 4,163,766.66.

3.2.2 Contribution of Organic Rice Farming to Household Income

The contribution referred to in this study is the contribution of organic rice farming carried out in the research area as many as 30 farmers who work as organic rice farmers.

Table 6. The contribution referred to in this study is the contribution of organic rice farming

No	Source of Income	Contribution	Amount (Rp)
1.	Organic Rice Farming Income	7,883,775.88	65.45%
2.	Income Outside Organic Rice Farming	4,163,766.66	34.55%
	Total Revenue	12,047,542.54	100%

Based on the table above, it can be concluded that based on the average income of organic rice farming and income outside of organic rice farming, namely organic rice farming income of IDR 7,883,775.88 and contributing to a household income of 65.45% of organic rice farming income divided by total income multiplied by 100 %. the total income of respondent farmers and the average income outside of farming is Rp. 4,163,766.66 and contributes to a household income of 34.55% of income outside of organic rice farming divided by total income multiplied by 100%. The total household income is Rp. 12,047,542.54. Based on the description above, it can be concluded that organic rice farming in the Community Development Farmers Group in Andong Village, Andong District, Boyolali Regency is feasible because it shows a contribution to a household income of 65.45%. This is used by farmers to meet family needs, such as the cost of daily meals, children's school fees, and so on, while income outside of farming only contributes to household income by 34.55%. This is because farmers are more focused on organic rice farming and for workers outside farmers as a sideline.

4. Conclusion

Based on research on organic rice farming in the Community Development Farmers Group, Andong Village, Andong District, Boyolali Regency in 2021, it can be concluded as follows:

1. The average total cost paid is IDR 2,061,374.12 per farm, the average revenue for organic rice farming is IDR 9,945,150.00 per farm, and organic rice farming income is IDR 7,883,775.88 per farm.
2. Organic rice farming has a higher contribution, which is Rp. 7,883.775.88 or 65.45% of the total household income of Rp. 12.047.542.54, this shows that organic rice farming is a source of income that contributes to household income. household income, compared to income outside of organic rice farming only contributed Rp. 4,163,766.66 or 34.55% of the total household income of Rp. 12,047,542.54. So organic rice farming in the Community Development Farmers Group, Andong Village, Andong District, Boyolali Regency is feasible.

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