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Analysis Of Income And Feasibility Of Rice Farming Before And During Covid-19 In Seram Utara Timur Kobi Sub-District

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Abstract

Lowland rice is a source of life for humans where most of the rice is processed as rice which is a source of energy consumed by many people, especially Indonesia. The purpose of this study was to analyze income, eligibility, land rent and factors that affected income during the Covid-19 pandemic in Morokay Village. This research was conducted in Morokay Village, North Seram District, East Kobi with a total of 42 rice farmers as respondents. The data collected was then analyzed quantitatively (income, eligibility, land rent and multiple linear regression tests) using Excel and then explained qualitatively. The results of the study showed that the average income before Covid-19 for lowland rice farmers was IDR 10,562,107.64 per planting season. During Covid-19, the income of paddy rice farmers was Rp. (-914,664.95) per growing season. The feasibility results before and during the pandemic had an R/C ratio of 2.55 and 0.86. R/C aims to make production before the pandemic feasible, while during the pandemic it was not feasible. Income results based on rice field farmers' land rent before and during the Covid-19 pandemic amounted to Rp. 2,720,988.19 and Rp (-827,178.476) which shows that before the pandemic it was still feasible because the income was greater than land rent of Rp. 2,000,000 per planting season, while during the pandemic, renting land is not suitable for farming because income is less than renting land. Factors that affect farmers' income are the production and cost of pesticides.

Keywords: covid-19 pandemic; income; appropriateness.

INTRODUCTION

The agricultural sector is one sector that is relied upon, because the agricultural sector is still playing an important role in supporting the national economy. The agricultural sector also has an important role in alleviating poverty, agricultural development which is related both directly and indirectly with efforts to increase the

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welfare of farmers and efforts to overcome turbidity, especially in rural areas. (Nainggolan, 2021).

Agricultural development should get better attention. Even though the priority on the industrialization policy has been dropped. However, the agricultural sector can have the ability to generate a surplus, this happens when productivity is enlarged so as to produce higher farmer incomes as income increases indirectly the standard of living also increases. The increase in living standards is obtained by increasing food products through agricultural intensification, extensification and diversification which are expected to improve the standard of living of farmers, expand employment opportunities for groups of people who are still dependent on the agricultural sector (Sudarman, 2001. in Fatmawati M, 2013).

The Covid-19 pandemic spread on March 11 2020, where its spread caused WHO to declare an emergency situation and was classified as a Covid-19 pandemic which had suppressed global economic growth and had social and economic impacts, especially in the agricultural sector. The existence of restrictions on movement and distribution in the midst of society which aims to break the chain of transmission of the Covid-19 virus which is vulnerable to human interaction has proven to have an impact on the agricultural sector. (ILO. April 2020).

The Maluku Provincial Government determined that the status after the discovery of a positive case of Covid-19 on March 22 2020, this was then upgraded to the status of an Extraordinary Event (KLB) in Maluku (Patty. 2020). However, after the announcement of the Covid-19 pandemic until 2021, the agricultural sector continues to show improvement. (BPS Province of Maluku, 2021).

Maluku Province is an area that has a lot of agricultural land, both rice fields and other agricultural land. Paddy fields provide very broad benefits, especially in the provision of food to meet community needs.

Because basically after the Covid-19 pandemic, most of the rice farmers in Morokay Village no longer planted rice but were farming other commodities such as horticulture. There are some people who farm rice and the results are not in accordance with expenses because of continuous crop failures due to pest attacks and so on.

Every year the area of paddy fields and harvest yields in Morokay village always changes so that it affects the amount of rice production. In 2020 the land area of Morokay village is 696 ha with a rice yield of 3.5 tons per hectare for dry milled grain and the total harvested area for grain production 2 is 187.5 tons, in 2021 the land area of Morokay Village will decrease to 530 ha of harvested area to 1,855 tonnes because most of the people of Morokay Village have switched to the function of growing horticultural food. (Gakpoktan Morokay Village).

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In general, increased production can change the success of farming, however, the high production obtained per unit area of land does not guarantee high income for lowland rice farming, so there are several things that become obstacles that result in crop failure and decreased income for rice farmers in Morokay village, such as pests. , land, prices, and costs in farming.

Objectives

This article intends

1. Find out the size and profit of paddy rice farming before and during the Covid-19 pandemic in Morokay Village, North East Seram District, Kobi.
2. Find out the feasibility of paddy rice farming before and during the pandemic in Morokay Village, North East Seram District, Kobi.

DISCUSSION

Location of Geographical Conditions of the Research Place

Morokay Village is the research location. Administratively, Morokay Village belongs to the North East Seram District, East Kobi, Central Maluku Regency. The total area of Morokay Village is 1,470 ha, with the following area boundaries. To the north it is bordered by the Seram Sea area, to the south by Waimusi Village, North Seram District, East Kobi, to the east by Waitonipa Village, North Seram District, East Kobi, to the west by Samal Village, Seram Utara District, East Kobi. The total population of Morokay Village in 2022 is 1,507 consisting of 729 men and 778 women.

Characteristics of Respondents

Table 1. Characteristics of Lowland Rice Farmers in Morokay Village Based on Age, Education Level, Farming Experience, Number of Family Dependents, and Area of Lowland Rice Farming.

Category	Number (people)	Percentage (%)
Age		
30-64 (Productive)	38	90,48
>64(less Productive)	4	9,52
Total	42	100
Level of education		
SD	27	64
SMP	9	21

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SMA S1	5 1	11 4
Total	42	100
Farming experience >10 11-20 20-30 >30	 3 9 20 10	 7 21 48 24
Total	42	100
Number of family dependents 1-4 5-7	 31 11	 74 26
Total	42	100
Land area < 1ha rent < 1ha personal 2,5-4 ha	 12 24 6	 57,14 28,58 14,28
Total	42	100

Source: Primary data processed(2022)

Age as a farmer who is still young (productive age), usually will be more enthusiastic in trying compared to older farmers. (BPS, 2018), dividing the age group that is classified as productive, namely ranging from 17-64 years, while 65 years and over is the age group that is already less productive. Table 1 shows that the percent of farmers in the study locations are in the productive age category. From a physical perspective, as many as 90 percent of farmers can carry out their farming activities properly.

The level of education is a factor that can affect the success rate of a person's work and is a supporting factor in farming. Education also plays an important role in determining the quality of human resources. Based on table 1, it can be seen that the highest percentage is at the Elementary School Level at 64% while the lowest percentage at the Undergraduate Level is 4%. This suggests that low education will affect farmers' absorption of technological developments and new innovations for farmers. Meanwhile, farmers with higher education are generally young in accepting innovations that are beneficial for farming activities. Lowland rice farming has been a

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profession since childhood so that the average experience possessed by lowland rice farmers in Morokay Village. (Abdul Hamid, 2016).

Farming experience can be seen how long it takes farmers to pursue farming. Farmers who have been involved in farming activities for a long time usually have a better understanding and knowledge of land conditions compared to farmers who have just been involved in agriculture. (Gusti, all, 2021). Table 1 shows that farmers in Morokay Village who have long farming experience ranging from 20-30 years are 48%. Farmers who have been involved in farming activities for a long time usually have a high level of experience and skills in carrying out farming activities. (Agatha and Wulandari, 2018). The more work a worker gets, the more trained and skilled the worker will be in carrying out the job. The existence of a workforce that has work experience is expected to get a job that is in accordance with their expertise, it is hoped that it will be able to increase their productivity, it can be said that work experience has a positive influence on labor productivity. (Amron, 2009 in Putri 2022).

The number of family dependents can affect the income and expenses of farming families, the more the number of dependents will become a burden for farmers when viewed from an economic perspective. However, the number of families is an important asset in assisting farmer activities because it will increase the family's workforce so that they do not spend money on external labor costs. (Abdul Hamid, 2016). Table 1 can be seen that most of the respondents have less than 5 dependents with a total size of 74%. This means that the number of dependents by rice farmers is small because the number of dependents is less than 5 people. Meanwhile, 26% of people have large dependents of more than 5 people.

Land area is an important factor in efforts to increase production which can affect the income and profits received by farmers. Table 1 can be seen that the number of respondents was 41 farmers who owned land area with private ownership status as many as 29 farmers with land area of more than 1 – 4 hectares while the area of loan (lease) land was 12 farmers with land area > 1 ha. most of the agricultural land in Morokay Village is privately owned whose people are transmigrant communities from the government.

Production Cost

Table 2 shows that production costs received before and during the Covid-19 pandemic experienced differences. Where during the Covid-19 pandemic the total costs showed that the total production costs incurred by farmers before the Covid-19 pandemic reached Rp. 6.799.178,071./ha/MT. Meanwhile, the total production costs incurred by farmers during the Covid-19 pandemic were Rp. 6,572,462.57.

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Reception

Table 2 shows that receipts before the Covid-19 pandemic amounted to Rp. 17,361,285.71/ha/MT and decreased during the Covid-19 pandemic by Rp. 5,657,797.62./ha/MT So that the income received by lowland rice farmers has decreased during Covid-19.

Income

It can be seen in table 2 that the average income of paddy rice farmers before the Covid-19 pandemic was Rp. 10,562,107.64/ha/MT then during the Covid-19 pandemic it was Rp.(-696,744.59)/ha/MT. Which means that the paddy rice farmers in Morokay Village experienced differences before and during the co-19 pandemic, in which total income during the co-19 pandemic decreased, resulting in losses during the co-19 pandemic. The income received during the Covid-19 pandemic has greatly decreased compared to the costs incurred by patents. The soaring prices of pesticides and fertilizers are one of the reasons for the decline in the income of paddy rice farmers in Morokay. So that the lowland rice farmers in Morokay Village turned to become horticultural farmers

Table 2 Final Production Results of Paddy Rice Harvest in Morokay Village

Description	Befor Pandemic covid-19(Ha/Rp/MT)	During Pandemi Covid-19 (Ha/Rp/MT)
Production cost		
Variable cost :		
a. seed	Rp. 538.809,5	Rp. 538.809,524
b. fertilizer	Rp.517.015,29	Rp. 534.307.82
c. pesticide	Rp. 981.752.52	Rp. 937.744,50
d. TK	Rp.1.870.833,85	Rp.1.870.833,85
e. threshing	Rp. 2.000.000	Rp. 1,800.000
Fixed cost :		
a. depreciation	Rp. 319.338	Rp. 319.338
b. land lease	Rp. 2.000.000	Rp. 2.000.000
Total cost	Rp. 6.799.178,071	Rp. 6.572.462,57
Reception	Rp. 17.361.285,71	Rp. 5.657.797,62
Income	Rp. 10.562.107,64	Rp. (-914.664,95)
Ration R/C	2,55	0,86

Source: Primary data processed (2022)

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Based on the results of the R/C analysis conducted on paddy rice farming before and during the Covid-19 pandemic. Before the Covid-19 pandemic, the average receipt was Rp. 17,361,285.71/ha. During the Covid-19 pandemic, the average revenue decreased by IDR 5,657,797.619/ha so that the R/C ratio before the pandemic was 2.55. In accordance with the applicable provisions that paddy rice farming in Morokay Village is feasible to cultivate. while during the covid-19 pandemic the value of the R/C ratio was 0.86. In accordance with applicable regulations that are not feasible to be cultivated.

Table 3. Paddy Field Income Based on Land Rent

Description	Amount	
	Befor	During
Income	Rp. 2.720.988,19	Rp. (-827.178,48)
Land area	Rp. 2.000.000	Rp. 2.000.000

Source: Primary data processed (2022)

Table 3 shows that the results of paddy rice income based on land rent before and during the Covid-19 pandemic showed a difference where income before Covid-19 was higher compared to land rent while during Covid-19 income was less than land rent and even mine income. Based on these criteria, before the Covid-19 pandemic it was still feasible to rent land, while during Covid-19 these criteria meant that paddy rice farming was not feasible to rent land because the rental value was greater than the income of paddy rice farmers in Morokay Village.

Factors Influencing the Income Level of Rice Farmers in Morokay Village.

Based on the results of multiple linear regression tests, the termination coefficient (Adjusted R Square) is 91.10 percent. The income of lowland rice farmers in Morokay Village can be explained by (X_1) land area, (X_2) rice production, (X_3) rice threshing costs, (X_4) fertilizer costs, (X_5) pesticide costs, (X_6) labor costs, (X_7) seed costs.

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Table 4. Partial Multiple Regression Test Results Factors Affecting the Income Level of Lowland Rice Farmers in Morokay Village

Variable	Sig Velue	t-velue count	coefficient value
constant	.005	-3.034	-3571438.951
Land area	.047	2.058	468683.263
Production	.000	15.811	5940.163
Threshing costs	.494	.691	1.353
Fertilizer costs	.012	-2.667	-1.564
Pesticide costs	.003	-3.189	-.577
labor costs	.005	-2.993	-4.289
Seed costs	.005	-3.034	-3571438.951

The results of multiple linear regression tests on the independent variables (land area, rice production, threshing costs, fertilizer costs, pesticide costs, labor costs and seed costs). The income of farmers in Morokay Village shows that there are 3 variables that affect the income of lowland rice farmers, namely production (X_2) and pesticide costs (X_7).

Table 4 shows the results of multiple regression analysis which can be written using the regression equation of the factors that affect the income of lowland rice farmers, namely:

(Y) = (-3571438,951)+468683.263X_1+5940.163 X_2+1.353 X_3+(-1.564)X_4+(-577)X_5+(-4.289) X_6+(-3571438.951) X_7.

Land Area (X_1)

Based on the results of multiple linear regression tests, a significant value (p value) of 0.47 was obtained. This means that partially the land area (X1) does not affect farmers' income.

Production (X_2)

Based on table 4 shows the multiple linear regression test obtained a significance value (P Value) of 0.00. this means that production (X_2) has a significant effect on the income of rice farmers. In addition, the calculated t value of 15.81 is also greater than the t table value (2.032), which means that lowland rice production (X_2) has a significant effect on the income of lowland rice farmers.

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Threshing Cost (X_3)

Based on table 4, it shows a significance value (P Value) of 0.49, meaning that it does not affect the income of lowland rice farmers.

Fertilizer Cost (X_4)

Based on table 4, it shows a significance value (P Value) of 0.12, this means that there is no significant effect on the income of lowland rice farmers.

Pesticide Cost (X_5)

Based on table 4 the cost of pesticides affects the income of lowland rice farmers with a significance value (P Value) of 0.03. the t-count value of 3.18 is greater than the t-table value of 2.032, which means that pesticides have an effect on the income of lowland rice farmers.

Labor Costs (X_6)

Based on table 4 the cost of fertilizer has no effect on the income of rice farmers with a significance value (P Value) of 0.05.

Seed Cost (X_7)

Based on table 4, it shows a significance value (P Value) of 0.05, meaning it does not affect the income of lowland rice farmers**.**

CONCLUSION

Based on the results of the R/C analysis conducted on paddy rice farming before and during the Covid-19 pandemic. Experiencing a difference so that the R/C ratio before the pandemic was 2.55. Lowland rice farming is feasible for cultivation. while during the Covid-19 pandemic the value of the R/C ratio was 0.86. Farming is not worth trying. Based on land rent, income before the Covid-19 pandemic was Rp. 2,720,988.19/ha/MT. Whereas during the Pademi period, the income value of paddy rice farming was IDR (-827,178,476). ha/MT. This means that paddy rice farming before the pandemic was still considered feasible because the income was greater with the cost of renting land. Meanwhile, during the pandemic, it was not possible to rent land.

Based on the results of multiple regression tests, all independent variables affect the income of lowland rice farmers. While partially the factors that significantly influence the income of lowland rice farmers are lowland rice production (X2) and lowland rice pesticide cost.

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REFERENCES

Abdul Hamid (2016) Revenue Analysis Rice Field Farmers in Woyla District.

Agataha M.K, Wulandari E. (2018). Analysis of Factors Influencing Potato Production in Mitra Sawangi Farmer Groups, Barusari Village, Pasirawangi District, Garut Regency. Agroinfo Galuh Student Scientific Journal Vol. 4 Pgs 772-778

BPS. (2018). Official News from the Central Bureau of Statistics: Poverty Profile in Maluku in 2018.

Gusti. I.M, S. Gayatri, A.S. Prasetyo (2021). The Influence of Age, Education Level and Years of Farming on Farmers' Knowledge of the Benefits and How to Use the Farmer's Card in Parakan District. Journal of Research and Development of Central Java Province Vol.19 No.2 December 2021, Pages 209-221

Nainggolan. B. P. (2021) Feasibility Analysis Lowland Rice Farming in Senyerang District, West Tanjung Jabung Regency.

Patty, RR (2020). Covid-19 Positive Cases First in Ambon Establishing KBL https://amp.com/regional/read/2020/03/23/10150621/cases-posistif-covid-19-pertama-di-ambon-maluku-tetapkan-klb-corono. Accessed April 17, 2022.

Putri. D. (2021). Analysis of the Economic Value of Water Resources for Rice Farming (Oryza

Sativa L) and Household Needs of Farmers in Antutan Village, Tanjung Palas District, Bulungan Regency. Agribusiness Study Program, Faculty of Agriculture, University of Borneo Tarakan.

Sugiyono. (2010). Educational Research Methods Quantitative, Qualitative, and R&D Approaches. London: Alphabet

Suratiyah, (2011). Agricultural Science Disseminator Independent. Jakarta

Utami. N. R (2022) The Influence of Economic Growth and Local Own Revenue on Capital Expenditures in Cianjur Regency for the 2016-2020 Period. Faculty of Business and Business Economics, Pakuan University, Bogor

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