

Ethnic Mosaic: Analysis Of Management And Productivity Of Lowland Rice In South Bangka Regency

Management and Productivity of Lowland Rice

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ABSTRACT

This study aims to identify and describe the farm management characteristics of different ethnic farmer groups in the rice production centers of South Bangka Regency and to examine the influence of ethnic diversity on the variability of lowland rice productivity. Data were collected through a survey of 60 rice farmers in Rias Village, Toboali Subdistrict, South Bangka Regency. The analysis employed descriptive statistics and multiple linear regression to assess the effects of several factors on rice productivity, including seed quantity, labor, fertilizer usage, pesticide usage, and ethnicity. The results reveal that although each ethnic group holds distinct cultural traditions, their farming techniques and management practices are largely similar. Furthermore, variations in rice productivity in Rias Village are significantly influenced by Javanese, Sundanese, and Bugis ethnicities, alongside key production input variables such as seed quantity, labor, fertilizer, and pesticide use.

Keywords: mosaic, ethnicity, productivity, paddy rice

INTRODUCTION

Various ethnic farming communities can be traced throughout the Regency of Bangka Belitung Islands Province. Amin & Ikramatoun, (2018) stated that the transmigration period in the 1980s succeeded in bringing people from several regions to South Bangka Regency, one of which was in Rias Village, Toboali District. The majority of transmigrants who came to Rias Village were Javanese and Sundanese. The transmigration program is intended to increase the status of the independent area development index to become competitive through the development of agricultural production centers.

South Bangka Regency is the largest contributor to rice production and has the highest productivity in the Bangka Belitung Islands Province, which has great potential in cultivating rice plants to reduce rice dependence from outside the region. As research (Anwar, 2023) shows local rice production is 35,000 tons of rice/year while the need for rice is 174,000 tons/year, which means that the ability of local rice production in Bangka Belitung is still lacking. BPS South Bangka Regency (2024) noted that in 2022 Toboali Sub-district was the largest rice producer in South Bangka Regency at 17,059 tons of dry milled grain (DMG). The main contributor to South Bangka's paddy rice production is Rias Village with a productivity of 6.5 tons of DMG/hectare, while the national figure is 5.25 tons of DMG/hectare (Statistics Indonesia, 2023b).

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Interestingly, the ability of Desa Rias to outperform the national average productivity of paddy rice is partly influenced by the ability of farmers in the area to manage their farms. Rias Village is a multicultural village that consists of various ethnicities. Ethnic diversity occurs because Rias Village is a transmigration destination area. Bangka ethnicity as the original community of Bangka, Javanese ethnicity settled in a hamlet called Satuan Pemukiman A (SP-A), Sundanese ethnicity in Satuan Pemukiman B (SP-B) and Air Paiman hamlets, and Bugis ethnicity in Sungai Gusung hamlet (Amin & Ikramatoun, 2018). There are 42 farmer groups of paddy rice commodities incorporated in the Gapoktan Sepakat Jaya (BPP Desa Rias, 2023). The distribution of farmer groups with different ethnic backgrounds in various hamlets of Rias Village has not prevented the implementation of various agricultural programs. Mawarny et al. (2024) revealed that harmonization among farmer groups in the village was the key to the successful implementation of farming input assistance programs, rice farming insurance, and paddy rice cultivation practices.

Increasing crop productivity is the main goal, but on the other hand, farmers experience problems related to the diverse understanding and implementation of rice cultivation technology among farmer groups. In addition, Sitorus *et al.*, (2023) found that rice farmers in the Bangka region have limited understanding, which is indicated by their knowledge, attitudes, and expectations. So, understanding the ethnic diversity of farmer groups and the characteristics of their business management is crucial as a basis for the development of further policies aimed at increasing rice yields as well as the welfare of farmers.

LITERATURE REVIEW

The Concept of Causal Ethnic Relations in Agricultural Practices

Ethnic groups can have different patterns of cooperation and land tenure systems, which affect how they cooperate in agricultural practices. Hence, communal-based farming patterns, different yield sharing, and different natural resource management systems (Horst & Marion, 2019).

Diversity of Rice Farming Communities

Kesek and Tarore(2017) reported that there is a relationship between farming practices and the yield productivity achieved by each ethnic group of rice farmers. Arsyad *et al.*, (2023) found different socioeconomic conditions in multiethnic communities. To understand the economic conditions, some of the factors considered are the size of the paddy field owned, its ownership, the amount of labor involved, the production yield and income earned, the way the products are marketed, the level of savings and investment, how expenditures are made, and the sources of capital available.

Production and Productivity

Production can be defined as the result of a process or economic activity that utilizes and combines various inputs (Agung *et al.*, 2008). Pimentel, (2009) says that productivity is the result of a combination of production inputs or factors of production such as land, labor, capital, and so on. According to Nugroho, (2021) productivity is the ratio between production output and production factors (inputs), so mathematically $productivity = output : input$

METHODS

The survey method was chosen in this research, with assistance from the Rias Village agricultural extension officer. The survey process included determining the coordinates of farmer group locations by ethnicity in Rias Village, Toboali Sub-district, South Bangka. In addition, face-to-face interviews were conducted with rice farmers to obtain socioeconomic data and farming practices from each ethnic group. The sampling technique used was probability sampling stratified random sampling to ensure representation of each ethnic group (Machali, 2021).

Table 1. Number of samples by proportionate stratified random sampling in farmer groups based on ethnicity in Rias Village, 2024

Ethnicity	Number of farmer group	Number of farmer	Sample of farmer group	Sub-population of farmers' groups	Strata = (number of sub population at farmers' groups strata x sample)/number of population	Number of Sub-Samples
Sunda	2	123	Sri Rahayu	70	(70x60)/405	11
Jawa	7	501	Sri Rejeki	180	(180x60)/405	26
Bangka	5	333	Balai Benih	88	(88x60)/405	13
Bugis	3	134	Sinar Bone	67	(67x60)/405	10
Total	17	1.091		405	Total	60

Source: Data processed (2024)

To understand and describe the ethnic diversity of farmers and how they manage their farming businesses in Rias Village, Toboali Subdistrict, South Bangka Regency, this research uses descriptive analysis. According to Sugiyono (2021), this statistical method serves to describe existing data without making generalizations.

To explain the effect of the ethnic diversity of farmer groups on the variability of paddy rice productivity in the rice production centers of South Bangka Regency, multiple linear regression analysis was used. According to Pasaribu *et al.* (2022), multiple linear regression analysis is a regression analysis method to determine the relationship of the dependent variable (Y) with several independent variables (X1, X2, ..., Xn) by showing a linear relationship

The following is the multiple linear regression model equation used:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8 + b_9D_1 + b_{10}D_2 + b_{11}D_3 + e$$

- Y = Paddy Rice Productivity (tons dry milled grain/ha/mt)
- A = Constant
- b₁, b₂, b₁₂ = Coefficient of Regression
- X₁ = Seed Quantity (kg/ha/planting season)
- X₂ = Labor (man-days/ha/ planting season)
- X₃ = Fertilizer Quantity (kg/ha/ planting season)
- X₄ = Pesticide Quantity (L/ha/ planting season)
- X₅ = Rent of Tools and Machinery (Rp/ha/ planting season)
- X₆ = Farmer's Age (years)
- X₇ = Farmer's Education (years)
- X₈ = Experience in Rice Paddy Farming (years)
- D₁ = Dummy (value 1 for Javanese ethnicity, 0 for other)
- D₂ = Dummy (value 1 for Sundanese ethnicity, 0 for other)
- D₃ = Dummy (value 1 for Bugis ethnicity, 0 for other)
- D₄ = Dummy (value 1 for mixed-ethnicity, 0 for other)
- E = Residual

Furthermore, classical assumption tests and statistical tests are carried out. To ensure the validity of the model, classical assumption tests were conducted, including normality, autocorrelation, heteroscedasticity, and multicollinearity. Furthermore, to test the significance and magnitude of the effect, statistical tests consisting of the coefficient of determination, F-test, and t-test were used. Before multiple linear regression analysis is carried out, it is necessary to test the classical regression assumptions. According to Ghozali (2013), here are some classic regression assumption tests:

1. Normality test with the aim of seeing in the regression model the distribution of data observed with the normal probability plot graph is normally distributed.
2. The Durbin-Watson test is used to detect the presence of autocorrelation..
3. Identifying differences in the variation of variables in the observations, with a heteroscedasticity test through a scatterplot graph.

4. Multicollinearity testing is done by checking the tolerance value and Variance Inflation Factor (VIF) with the aim of knowing whether the independent variables in the regression model are correlated.

The next step after classical assumption testing is to perform multiple linear regression analysis, which includes:

1. To find out how accurate the regression model is in predicting the dependent variable and how much the independent variable contributes to its explanation, the coefficient of determination is used. Interpretation is based on the adjusted R^2 value.
2. The F test aims to determine whether all independent variables together have a significant influence on the dependent variable. The decision is based on the comparison of the calculated F value with the F table value and the significance value (p-value) which must be less than 0.05.
3. The t-test is used to evaluate the significance of the individual effect of each independent variable on the dependent variable in the regression model. The effect is considered significant if the absolute t-count value exceeds the t-table value and the p-value is less than 0.05.

RESULT AND DISCUSSION

Farm Management Characters Paddy rice productivity of each ethnic group of farmers

The research found that there are 4 ethnic groups of farmers, namely Bangka ethnicity as the local ethnicity, as well as ethnic migrants, namely Bugis, Sundanese, and Javanese. The existence of each ethnicity is side by side, but the locus is grouped in the Rias Village area. The location of the settlement is close to the rice fields managed by each farmer.

Table 2. Description of farmer-owned paddy fields for each ethnic group in Rias village

Ethnicity	Average land area (ha)							Total
	0,25	0,50	0,75	1,00	1,25	1,50	2,00	
Sunda	-	3	-	3	5	-	-	11
Jawa	3	3	7	3	-	6	4	26
Bangka	4	7	-	2	-	-	-	13
Bugis	1	1	4	4	-	-	-	10
Total	8	14	11	12	5	6	4	60

Source: Data processed (2024)

Based on observations in Rias Village, there are variations in the size of paddy fields owned by farmers from various ethnic groups. Farmers from the Javanese ethnic group tend to have larger paddy fields (1,30 ha) compared to farmers from other ethnic groups. This may be related to the history of the transmigration program, which was initially carried out by Javanese ethnic farmers as wet-rice farmers. This difference in land ownership may affect the productivity, income, and welfare of each group of farmers.

Ethnic group paddy rice productivity and influencing factors.

In Rias Village, despite the diverse traditions and cultures of the various ethnic groups of farmers, the technical practices and management of wet-rice farming show significant uniformity. This is due to the implementation of standardized wetland rice cultivation techniques under the active supervision and guidance of field extension officers. A systematic and structured extension program ensures that all farmers, regardless of ethnic background, receive the same information and training on best agricultural practices, from seed selection, tillage, and fertilization to pest and disease control. Thus, the role of field extension workers is crucial in bridging cultural differences and ensuring the adoption of uniform agricultural technology so that potential productivity differences due to variations in traditions can be minimized. In summary, the data on differences in productivity of paddy rice in each ethnic group are described in the following table.

Table 3 explains that the average land area of wet-rice farmers of Javanese ethnicity in Rias Village is larger than that of other ethnicities, as well as the income being higher than that of farmers of Sundanese, Bangka, and Bugis ethnicities. This phenomenon may be caused by several factors. Javanese farmers are allegedly more intensive in agricultural

practices, such as the use of superior seeds, proper fertilization, and more efficient irrigation management.

Table 3. Productivity of paddy rice and average income of each ethnic group of paddy rice farmers in Rias Village

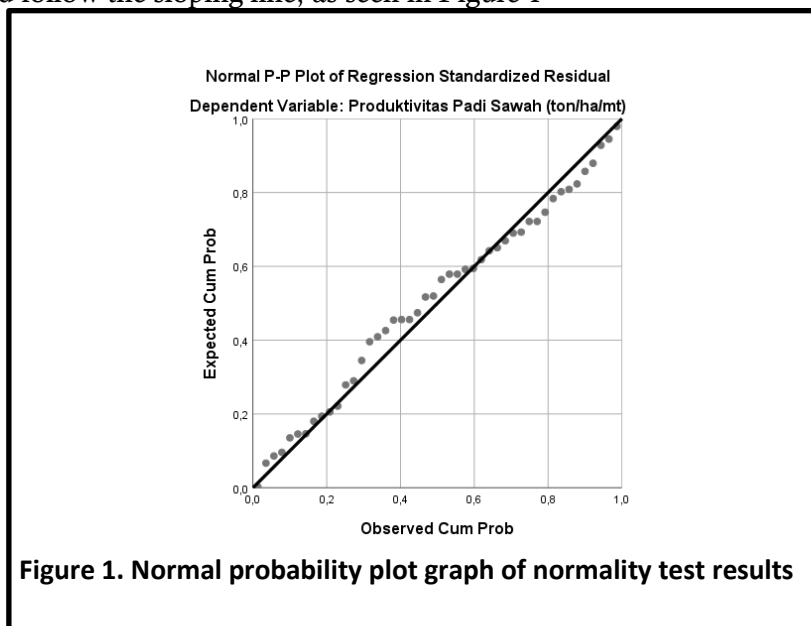
Ethnicity	land area (ha)	Productivity (tons of dry grain per ha)	Average		
			Revenue Rp/ha/ planting season	Cost Rp/ha/ planting season	Income Rp/ha/ planting season
Sunda	0,89	4,59	35.198.000	9.712.100	25.485.900
Jawa	1,30	5,20	37.300.345	9.089.070	28.211.275
Bangka	0,50	5,08	28.060.500	9.149.600	18.910.900
Bugis	0,65	4,50	33.066.000	9.297.000	23.769.000

Source: Data processed (2024)

Analysis of various factors affecting the productivity of paddy rice using multiple linear regression analysis. The factors in question are the amount of seeds, labor, amount of fertilizer, amount of pesticides, and ethnicity. Before conducting multiple linear regression analysis, it is necessary to test the classical regression assumptions. According to Ghozali (2013), several classic regression assumption tests are:

1) Normality Test

The normality test in the multiple linear regression model is carried out by observing the distribution of data on the normal probability plot graph using SPSS 25. The assumption of normality is met based on the results of the graph, where the data points are scattered around and follow the sloping line, as seen in Figure 1



2} Autocorrelation Test

Autocorrelation test as a test to see autocorrelation through the Durbin-Watson test. The Durbin-Watson test results display a dW number of 2.076 with a dL number of 1.2013 and a dU number of 1.8906. Thus, the classic assumption is fulfilled, namely that there is no positive and negative autocorrelation because $dU (1.8906) < dW (2.076) < 4-dU (2.1094)$. The Durbin-Watson results for the autocorrelation test are shown in Table 4.

Table 4. Durbin-Watson value for autocorrelation test

Model	R	R Square	.adjusted R Square	Std. Error of the Estimate	Durbin-Watson
	0,898	0,799	0,761	0,45469	2,076

3) Heteroscedasticity Test

Heteroscedasticity test as a test to observe the inequality of variable variations in observations using a plot graph (scatterplot) in the SPSS version 25 program. The results of the scatterplot graph show an unclear pattern, namely randomly scattered points below and above the number 0 on the vertical axis, so that the classic assumption of heteroscedasticity is met. The scatterplot graph can be seen in Figure 2

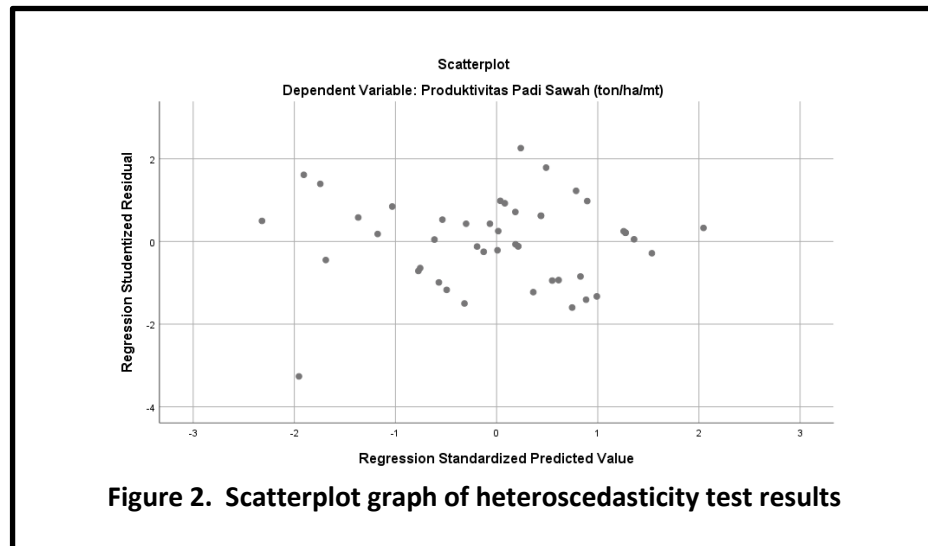


Figure 2. Scatterplot graph of heteroscedasticity test results

4) Multicollinearity Test

Multicollinearity in the regression model is tested by looking at the tolerance value and Variance Inflation Factor (VIF) to detect significant correlations between independent variables. The test results in this study show that there is no multicollinearity because all tolerance values are above 0.05 and all VIF values are below 5, so the classical assumptions are met (details in Table 5).

Table 5. Tolerance and VIF values of multicollinearity test results

Model	Collinearity Statistics	
	Tolerance	VIF
Seed Quantity (kg/ha/ planting season)	0,550	1,538
Labor (man-days/ha/planting season)	0,606	1,571
Amount of Fertilizer (kg/ha/ planting season)	0,681	1,162
Amount of Pesticide (L/ha/ planting season)	0,503	1,775
Javanese Ethnicity	0,565	1,652
Sundanese ethnicity	0,635	1,941
Bugis Ethnicity	0,541	1,559

5) Multiple Linear Regression Analysis

To understand the various factors that contribute to the productivity of wet-rice farmers in Rias Village, multiple linear regression analysis was used. The outputs of this analysis are the coefficient of determination, F-test results, t-test results, and regression coefficients (summarized in Table 6).

Table 6. Multiple linear regression analysis results

Model	Coefficient Regression	Standard Error	t-count	Sig.
Constant	-2,204	0,778	-2,832	0,006
Seed Quantity	0,043	0,019	2,506	0,018
Labor	0,115	0,029	3,633	0,001
Amount of Fertilizer	0,015	0,001	4,222	0,000
Amount of Pesticide	0,328	0,090	3,554	0,001

Javanese Ethnicity	0,795	0,196	3,999	0,000
Sundanese ethnicity	0,085	0,219	0,435	0,667
Bugis Ethnicity	-0,210	0,203	-0,987	0,320

Adjusted R Square : 0,781

F_{table} : 2,26

F-count : 20,351

t_{table} : 2,0245

Significance at α 5%

Based on Table 6, the multiple linear regression equation is obtained, namely:

$$Y = -2,204 + 0,043 X_1 + 0,105 X_2 + 0,005 X_3 + 0,328 X_4 + 0,795 D_1 + 0,085 D_2 - 0,200 D_3 + e$$

Multiple linear regression analysis in this study can be explained:

1. Coefficient of Determination, the Adjusted R² number is 0.781. This means that the influence of the number of seeds, labor, the amount of fertilizer, the amount of pesticides, Javanese ethnicity, Sundanese ethnicity, and Bugis ethnicity on the productivity of paddy rice is 78.1%; the rest is influenced by other independent variables not in this multiple linear regression model.

2. F test, the number F-count (20.351) > F_{table} (2.26) and a significance number worth 0.000 < 0.05, so reject H₀, which means the number of seeds, labor, the amount of fertilizer, the amount of pesticides, Javanese ethnicity, Sundanese ethnicity, and Bugis ethnicity simultaneously have a significant effect on the productivity of paddy rice. This is in line with the research of Laim & Simamora (2022), namely, the variables of seeds, land area, labor, fertilizers, and pesticides simultaneously have a significant effect on rice productivity seen from the significance number (0.006) < 0.05 and the number F-count (3.362) > F_{table} (2.25).

3. The t-test interpretation of the independent variables in this study is:

a) Number of seeds

The variable number of seeds with a significance value of 0.018 < 0.05 and t-count (2.506) > t-table (2.0245) so reject H₀ means that the number of seeds individually has a significant effect on the productivity of paddy rice in Rias Village. The regression coefficient of 0.043 is positive, meaning that for every addition of one kilogram of seeds, the productivity of paddy rice will increase by 0.043 tons dry grain/ha/ planting season. This is in line with the research of Akbar et al. (2017), namely, the variable number of rice seed purchases individually affects rice productivity observed from the significance number (0.031) < 0.05, and every addition of one kilogram of seeds, productivity increases by 0.025 tons/ha due to the positive regression coefficient number of 0.025, which means the use of seeds in accordance with the land area so that the number of seeds used will affect production and productivity. The average use of rice paddy seeds in Rias Village of 36 kg/ha is greater than the government recommendation through field agricultural extension workers, which is only 25 kg/ha (Director General of Food Crops, Ministry of Agriculture, 2021). This is because farmers are experienced in determining the amount of seeds used due to the low growth rate of seeds during seeding and the existence of replanting activities.

b) Labor

The labor variable has a significance value of 0.001 < 0.05 and t-count (3.633) > t-table (2.0245), so reject H₀ means that labor individually has a significant effect on the productivity of paddy rice in Rias Village. The regression coefficient of 0.115 is positive, meaning that every addition of one man-day in wet-rice farming activities will increase wet-rice productivity by 0.115 tons of dry grain /ha/ planting season. This is in line with the research of Laim & Simamora (2022), namely, the labor variable individually affects rice productivity observed from t-count (2.449) > t-table (1.998) with a significance number (0.017) < 0.05, and every addition of one labor, productivity will increase by 0.124 tons/ha because of the positive regression coefficient number of 0.124.

Quite a number of medium family sizes, namely families of 4-6 people who help farmers in paddy rice farming activities, will achieve an increase in the productivity of paddy rice. In addition, with the addition of man-days of labor, paddy rice farming activities will continue to be monitored and more easily consist of activities of cultivating paddy fields, sowing seeds, planting, fertilizing, spraying, and harvesting so that it is expected to increase production and productivity of farming.

c) The amount of fertilizer

The variable amount of fertilizer significance number is $0.000 < 0.05$, and the t-count (4.222) $>$ t-table (2.0245), so rejecting H_0 means the amount of fertilizer individually has a real effect on the productivity of paddy rice in Rias Village. The regression coefficient of 0.015 is positive, meaning that for every addition of one kilogram of fertilizer, the productivity of paddy rice will increase by 0.015 tons dry grain/ha/planting season. This is in line with Zarliani's research (2020), namely, the variable amount of fertilizer partially affects rice productivity observed from the significance number (0.013) $<$ 0.05, and every addition of one kilogram of fertilizer, productivity will increase by 1.010 tons/ha because of the positive regression coefficient value of 1.010. The average amount of fertilizer used in wet-rice farming in Rias Village of 343 kg/ha is less than the agricultural extension recommendation of 400 kg/ha. Therefore, it is necessary to increase the amount of fertilizer as recommended so that the production and productivity of paddy rice will increase.

d) Number of pesticides

The variable number of pesticides' significance number is $0.001 < 0.05$, and t-count (3.554) $>$ t-table (2.0245), so reject H_0 means that the number of pesticides individually has a significant effect on the productivity of paddy rice in Rias Village. The regression coefficient of 0.328 is positive, meaning that for every addition of one liter of pesticide, the productivity of paddy rice will increase by 0.328 tons dry grain/ha/planting season. This is in line with Zarliani's research (2020), namely, the variable number of purchases of rice seeds individually affects rice productivity seen from the significance number (0.000) $<$ 0.05, and every addition of one liter of pesticide, productivity will increase by 5.199 tons/ha due to the positive regression coefficient value of 5.199. The types of pesticides used in wet-rice farming in Rias Village are insecticides and fungicides, but there are still farmers who do not use fungicides; they only use insecticides. Pesticides are used by farmers so that wetland rice plants are not attacked by pests and diseases so that they grow with good results and productivity can increase. Increasing the amount of pesticides according to recommendations and needs will increase the production and productivity of paddy rice.

4. Javanese Ethnicity. The Javanese ethnicity variable significance number is $0.000 <$ 0.05, and t-count (3.999) $>$ t-table (2.0245). Then rejecting H_0 means that Javanese ethnicity individually has a significant effect on the productivity of paddy rice in Rias Village. The regression coefficient number is positive at 0.795, meaning that the productivity of wet-rice farmers of Javanese ethnicity is 0.795 tons dry grain/ha/planting season higher than the productivity of wet-rice farmers of other ethnicities. The average use of paddy field area by Javanese ethnic farmers of 1.30 hectares is greater than other ethnicities, so the production of paddy rice is also more. The most medium family size is 4-6 people so that it is enough to help farmers when wet-rice farming activities will increase the productivity of wet rice. Javanese ethnic farmers do not only focus on one seed variety but are quite diverse as many as 4 seed varieties, and the insecticide brands used are also quite diverse, as many as 5 insecticide brands. The number of farmers who do not use fungicides is 3 fewer than the Sundanese and Bugis ethnicities. This makes the productivity of paddy rice of Javanese ethnicity the highest in Rias Village, and Javanese ethnicity influences the productivity of paddy rice.

5. The Sundanese ethnicity variable significance number is $0.667 >$ 0.05 and the tcount (0.435) $>$ ttable (2.0245) then reject H_0 means that Sundanese ethnicity individually does not have a significant effect on the variable productivity of paddy rice in Rias Village. Based on the field, Sundanese ethnic farmers have rented land that must be paid for.

Sundanese farmers who do not use fungicides are 5 people more than Javanese ethnicity. The number of Sundanese ethnic family members is mostly in the range of 1-3 people in a small family size, while Javanese ethnicity has the largest family size of 4-6 people so that the labor in the family that helps him is also less. This makes the productivity of paddy rice in Rias Village not influenced by Sundanese ethnicity.

6. The Bugis ethnicity variable significance number is $0.320 > 0.05$ and the t-count ($-0.987 > t\text{-table} (2.0245)$) then reject H_0 means that Bugis ethnicity individually does not have a significant effect on the variable productivity of paddy rice in Rias Village. Based on the field, Sundanese ethnic farmers have the least land area of 0.63 hectares among Sundanese and Javanese ethnicities in Rias Village. The education level of the Bugis ethnic group is still low, with 7 people attending primary school and 3 people attending senior high school. The experience of Bugis ethnic farmers is mostly in the medium experience category for 10-20 years more experienced Javanese ethnic and half of the Bugis ethnic respondents do not use fungicides. This makes the productivity of paddy rice in Rias Village not influenced by Bugis ethnicity.

CONCLUSION

The results found that each ethnicity has a different tradition or culture but the technical and management of farming is almost the same as recommended by field extension officers. Variations in the productivity of paddy rice in Rias Village were determined by the variables of Javanese ethnicity, Sundanese ethnicity, and Bugis ethnicity together with the variables of the amount of seeds, labor, amount of fertilizer, amount of pesticides shown by the regression coefficient of 76.1%

The results show that the productivity of rice paddies in Rias Village is still below the national standard. Therefore, all farmer groups are advised to improve good cultivation practices and cooperate more closely with each other. To develop the potential of agricultural resources, especially paddy rice, in Rias Village, local wisdom must be strengthened by the existence of ethnic groups that still maintain their culture and traditions.

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REFERENCES

- [1] Agung, I. G. N., Pasai, N. H. A., & Sugiharso. (2008). *Teori Ekonomi Mikro Suatu Analisis Produksi Terapan*. PT Raja Grafindo Persada.
- [2] Akbar, I., Budiraharjo, K., & Mukson. (2017). Analisis Faktor-Faktor yang Mempengaruhi Produktivitas Padi di Kecamatan Kesesi, Kabupaten Pekalongan. *Jurnal Agrisocionomics*, 1(2), 99–111. <https://doi.org/10.14710/agrisocionomics.v1i2.1820>
- [3] Amin, K., & Ikramatoun, S. (2018). Kebijakan Publik Pada Masyarakat Multikultural Di Desa Rias, Kec. Toboali Bangka Selatan. 2(2), 81–93.
- [4] Anwar, H. (2023). Kurangi Ketergantungan Beras dengan Luar Daerah, Petani Padi Didorong Tingkatkan Produktivitas. Dinas Pertanian Dan Ketahanan Pangan Provinsi Kepulauan Bangka Belitung. <https://distan.babelprov.go.id/content/kurangi-ketergantungan-beras-dengan-luar-daerah-petani-padi-didorong-tingkatkan>
- [5] Arsyad, M., La Tarifu, & Harnina Ridwan. (2023). Caring for Different Economic Conditions to Maintain the Social Integration of Multi-Ethnic Farmers. *International Journal of Scientific Multidisciplinary Research*, 1(3), 131–156. <https://doi.org/10.55927/ijsmr.v1i3.3788>[6] Badan Pusat Statistik Kabupaten Bangka Selatan. (2024). *Kabupaten Bangka Selatan Dalam Angka 2024*. Badan Pusat Statistika, 22, 1–346.

- [6] BPP Desa Rias. (2023). Kelompok Tani Padi Sawah di Desa Rias. Balai Penyuluhan (BPP) Rias.
- [7] Kementerian Pertanian RI.(2021) Keputusan Direktur Jenderal Tanaman Pangan No.22/HK.310/C/I/2021.Petunjuk Pelaksanaan Kegiatan Demonstrasi Area Indeks Pertanaman 400 Tahun Anggaran 2021.
- [8] Ghozali, I. (2013). Aplikasi Analisis Multivariate dengan Program IBM SPSS 21. Badan Penerbit Universitas Diponegoro.
- [9] Horst, M., & Marion, A. (2019). Racial, ethnic and gender inequities in farmland ownership and farming in the U.S. *Agriculture and Human Values*, 36(1), 1–16. <https://doi.org/10.1007/s10460-018-9883-3>
- [10] Kesek, M. P., & Tarore, M. L. (2017). Perbedaan pendapatan petani padi sawah antara etnis lokal dan non lokal di daerah irigasi Sangkub Kabupaten Bolaang Mongondow Utara. *Agri-Sosioekonomi*, 13(1A), 67-76.
- [11] Laim, C. O. R., & Simamora, L. (2022). Analisis Faktor-Faktor yang Memengaruhi Produktivitas dan Kelayakan Usahatani Padi Sawah. *Jurnal Mimbar Agribisnis*, 8(1), 75–88. <https://doi.org/http://dx.doi.org/10.25157/ma.v8i1.5887>
- [12] Machali, I. (2021). Metode Penelitian Kuantitatif Panduan Praktis Merencanakan, Melaksanakan dan Analisis dalam Penelitian Kuantitatif. Fakultas Ilmu Tarbiyah dan Keguruan Universitas Islam Negeri (UIN) Sunan Kalijaga
- [13] Mawarny, A. (2024). Harmonisasi Sosial antar Suku dalam Budaya Sedekah Bumi (Studi Pada Petani di Desa Rias Kecamatan Toboali Kabupaten Bangka Selatan). Universitas Bangka Belitung.
- [14] Nugroho, A. J. (2021). Tinjauan Produktivitas dari Sudut Pandang Ergonomi (Nugroho, A). *Partnership for Action on Community Education*.
- [15] Pasaribu, B. S., Herawati, A., Utomo, K. W., & Aji, R. H. S. (2022). Metodologi Penelitian untuk Ekonomi dan Bisnis. Media Edu Pustaka.
- [16] Sitorus, R. Kartika, & Wahyuni, W. (2023). Farmers' understanding in Paya Benua Village, Mendo Barat District on the use of certified rice seeds supporting the green revolution. In *IOP Conference Series: Earth and Environmental Science* (Vol. 1267, No. 1, p. 012046). IOP Publishing.
- [17] Sugiyono. (2021). *Metode Penelitian Kuntitatif, Kualitatif, dan R&D* (2nd ed.). Alfabeta.
- [18] Zarlioni, W. O. Al. (2020). Pengaruh Faktor-Faktor Produksi Terhadap Produktivitas Usaha Tani Padi Sawah di Kelurahan Ngkari-Ngkari Kecamatan Bungi Kota Baubau. *Jurnal Sang Pencerah*, 6(2), 84–97. <https://doi.org/https://dx.doi.org/10.35326/pencerah.v6i2.667>