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Factors Affecting Business Rice Farmers Production In Newgae Village Mallawa District , Maro S Regency

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Abstract

This research was conducted in Barugae Village, Mallawa District, Maros Regency. Factors of production is an absolute requirement in a production process. In agriculture, the factors of production consist of land, labor, seeds, fertilizers, pesticides. Each of these production factors has different functions and benefits and influences each other. If one of the production factors is not met, then the production process in agriculture is hampered and cannot run. Barugae Village, Mallawa District, Maros Regency where the residents make a living as rice farmers. This study uses a quantitative descriptive research, the data source comes from as many as 215 people, with a sample of 30 respondents representing all farmers. With data processing techniques using multiple linear regression with the help of SPSS 25 software for windows. The results of this study indicate that the variable land area (X1) has a positive and significant effect on the variable rice production (Y). The labor variable (X2) has a positive and significant effect on the rice production variable (Y). The seed variable (X3) has a positive and significant effect on the rice production variable (Y). The fertilizer variable (X4) has a positive and significant effect on the rice production variable (Y). The pesticide variable (X5) has no positive and insignificant effect on the rice production variable (Y).

1. INTRODUCTION

Indonesia is a country that is rich in natural resources, where most of the people live from farming, therefore, the development of the agricultural sector is the driving sector for economic development and the rate of economic growth, the agricultural sector in this case is still one of the sectors that are needed. in the process of growth and can meet the consumption needs of its people.

This is indicated by the large number of residents or workers who live or work in the agricultural sector and national products originating from agriculture play an important role in the overall national economy. (Mubyarto, 1991).

Development is an attempt to make changes to the situation for the better and these efforts are carried out continuously. Development is a process of overhauling the structure of economic development in society so as to bring about better progress in the sense of increasing the standard of living of the people as well as to improve the quality of life in society.

In Indonesia, the need for rice will continue to increase from year to year in line with the increasing population and public awareness of the nutritional menu. Therefore, it is necessary to have its availability in large quantities and of good quality in accordance. Agriculture also bears the burden of a big problem, namely poverty and the narrowing of agricultural land is increasing. This situation naturally brings inequality that easily creates various forms of unrest or social threats. Poverty and the narrowing of agricultural land are two things that stretch before Indonesian farmers and are a problem. and the toughest obstacle to efforts to improve the standard of living of people in rural areas. Moreover, if there is crop failure due to

pests and diseases or not determining the climate, the farmhouse will have difficulty meeting the needs of its family (Nura Asri, 2005).

The agricultural sector is a strategic sector and plays an important role in the national economy and the survival of the community, especially in contributing to GDP, providing employment and providing domestic food. (Julius r latumaresa : 2015)

The role of agriculture in the economy in our country, especially as a producer of food ingredients, is increasingly varied following the growing demand from other sectors, as a producer of raw materials and non-agricultural product markets, as a source of foreign exchange in an increasingly liberal global competition, as a source of investment, and as a source of investment. source of labor.

The food crop that is mostly cultivated by farmer households is rice as a rice producer. In Indonesia, rice is a staple food for the Indonesian people and a very important commodity. Therefore , rice is a staple food and a source of calories for most of the population and the situation of rice can indirectly affect other consumption materials.

Production is a process of converting inputs into outputs so that the value of the goods increases. The production factors used in the production process are very important so that the production process carried out can be efficient and the production results obtained are optimal. Every factor of production contained in the economy is owned by someone. The production process is an activity that involves human labor, materials and equipment to produce useful products (Sofjan Assauri: 2016).

Production activities cannot be carried out if there are no materials that allow to carry out the production process itself. To be able to carry out production activities, it is necessary to have a large area of land/land, labor, seeds, fertilizers, pesticides. All of these are factors that can affect production.

In some literature, some experts include several factors of production, namely land, labor, seeds, fertilizers, pesticides and others. Each factor has a different function and is interrelated with each other. If one of the factors is not available, the production process or farming will not work, especially land, capital and labor (Daniel, 2004).

The role of irrigation in increasing and stabilizing agricultural production rests not only on productivity but also on its ability to increase other growth factors related to production inputs. Irrigation reduces the risk of crop failure due to the uncertainty of rain and drought, makes available nutrients more effective, creates optimum soil moisture conditions for plant growth, as well as better crop yields and quality. farming in locations where irrigation is not guaranteed. Farmers who use irrigation use fertilizers and drugs more than farmers who do not use irrigation water. This will cause changes in crop intensity. In addition to increasing agricultural production, the use of irrigation is expected to have a positive influence on income distribution (Sawiah, 2005).

The purpose of farming is, in principle, the same as other businesses, namely to make a profit, while strong food is a guarantee that all residents are safe from an adequate food supply. The agricultural development model used by the Ministry of Agriculture so far can be used as a reference. In developing the farm, one of the main activities that must be carried out is increasing agricultural production yields produced by farmers, increasing agricultural productivity can encourage the development of commodities that are in accordance with the potential of the existing

area. . Increased agricultural production will be able to increase the income of farmers which is a must in agricultural development. Good quality and quantity of agricultural products produced by farmers greatly affect farmers' income levels.

Based on the facts above, this research takes the title:

''Factors Affecting Rice Farmers' Production Business in Baruga e Village , Mallawa District, Maros Regency'

2. LITERATURE REVIEW

2.1 Farming

Enterprise i is actually not only limited to profit taking, but a production business. In this case, the utilization of land, costs, labor, and skills as factors of production will take place. If the utilization is done well it will produce good results and vice versa if the management is not going well then the results are not reliable. If the results are very good in terms of quantity and quality, it will produce a satisfaction for producers.

Farming is the study of how farmers manage inputs or production factors (land, labor, labor, capital, technology, fertilizers, seeds, and pesticides) effectively, efficiently, and continuously to produce high production so that their farming business increases. (Abd. Rahim and Diah Retno Dwi Hastuti, 2007). The other definitions of farming can be seen from each opinion as follows:

Farming is basically an efficient allocation of production facilities to obtain high farm income production. So farming is said to be successful if high production is obtained and at the same time high income. Farming management is a business selection between various alternative uses of limited resources which include land, labor , seeds, fertilizers, pesticides. In farming, there are also activities to organize (manage) assets and methods in agriculture or an activity to organize agricultural production facilities and technology in a business related to the agricultural sector.

Rice farming carried out by farmers in Mallawa Village, Baruga District, Maros Regency is a business or management that considers the ability of resources which include land, labor, aunts, fertilizers, pesticides and time. The goal is to have a job and earn income to pay for personal needs and daily family needs.

Prasetya (2006) stated that farming is a science that studies the norms that can be used to regulate farming in such a way that the highest income can be obtained. Meanwhile, according to Daniel (2001) farming is a science that studies farmers' ways to combine and operate various types of farming. production factors (land, labor, capital, fertilizer, seeds, pesticides and management) as well as how farmers choose the type and size of farming branches in the form of plants or livestock that can provide maximum and continuous income.

In developing countries, especially in Indonesia, the level of farmer inequality is largely determined by the yields obtained. The number of harvests is reflected in the amount of income received and the income is mostly met for family consumption purposes, thus the level of family consumption needs is met is largely determined by the income it receives. Based on macroeconomic theory, in principle, farming can be classified as the same as the form of the company, which generally requires capital, labor, seeds, fertilizers and pesticides to produce. (Mosher, 1997).

2.2 Production

In economics, production is likened to a business that can increase the usability of goods and services in order to obtain economic value. Production is an activity that determines the growth and

development of a company. The main purpose of production is that the goods and services produced can ensure the survival of the company, therefore the production department in producing goods and services is very concerned about the quality and quantity of the goods produced so that they have a selling value in the market and can provide benefits for the company.

An important aspect in the production process is the availability of resources or raw materials which are also known as factors of production. These factors of production are often called economic resources. Production is an activity that is measured as the level of output per unit period or time (Rahim, 2012).

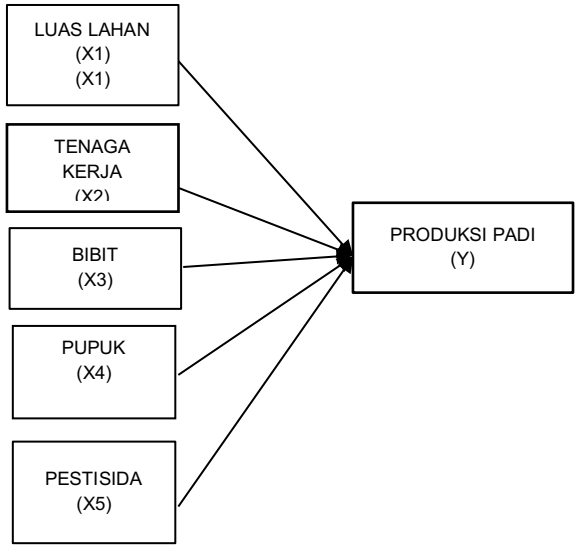
In the process of agricultural production, a modern farmer uses production factors (inputs) such as land, labor, machinery and fertilizers. These inputs are used during the harvest season, the farmer takes the crop output. The farmer always tries hard to produce efficiently or at a lower cost, thus the farmer always tries to produce the maximum level of output by using a certain dose of input, and avoid as little wastage as possible. possible.

2.3 Framework of Thought

Based on the background of the problem raised by the author, a framework was developed to explain *the Factors Affecting the Production Business of Rice Farmers in Barugae Village , Mallawa District, Maros Regency* .

Rice farming is a livelihood and the backbone of the economy. Farmer families are found in almost all regions in Indonesia. The production process will run smoothly if the required requirements can be met. These requirements are better known as factors of production. Rice business is a type of smallholder agricultural activity that is cultivated by farmers by combining production factors such as nature, labor, capital, technology and processing aimed at increasing production. This increase in production is expected to further improve the welfare of the farming community. The people of Barugae Village , Mallawa District , Maros Regency, mostly make a living as farmers. Among the factors of production are land area (land), labor, seeds , fertilizers and pesticides, systematically the description above can be shown in the picture below:

Fig.2.1
Research Framework .



2.4 Research Hypothesis

Based on the background and problem formulation above, the hypothesis can be proposed as follows:

1. It is suspected that land area has a positive and significant effect on rice production in Baruga village e Mallawa District, Maros Regency .
2. It is suspected that labor has a positive and significant effect on rice production in Baruga e Village, Mallawa District, Maros Regency .
3. It is suspected that seedlings have a positive and significant effect on rice production in Baruga village e Mallawa District, Maro Regency .
4. It is suspected that fertilizer has a

positive and significant effect on rice production in Baruga Village, Mallawa District, Maros Regency.

5. It is suspected that pesticides have a positive and significant effect on rice production in Barugae Village , Mallawa District, Maros Regency.

3. RESEARCH METHODS

3.1 Types of research

In this research, the type of research used is quantitative research. Quantitative research method is a method used to answer research problems related to data in the form of numbers.

Sugiyono (2016) states that the quantitative method is a scientific method because it has fulfilled concrete, objective, measurable, rational, and systematic scientific principles.

3.2 Data analysis technique

In this analysis using descriptive techniques, namely, the analysis used to reveal or describe something about the situation that is in accordance with the accurate facts of the place being studied. And in accordance with the applicable theory and recognized as true. occurred related to the Factors Affecting the Production Business of Rice Farmers in Barugae Village, Mallawa District, Maros Regency.

The data obtained from the results of field practice are then analyzed to achieve the objectives of this study. The analysis that will be used to analyze the data submitted is as follows:

First hypothesis. Analysis using the multiple linear regression equation model formula is as follows:

Y= a+b1x1+b2x2+b3x3+b4x4+b5x5+e

Information

Y= Rice Production

a= Constant

b = regression coefficient on each independent variable

X1= Land area

X2= Labor

X3= Seeds

X4= Fertilizer

X5= Pesticide

e= Error

Rice Production (Y) is the dependent variable while X1, X2, X3, X4, X5 are independent variables. To find out whether the independent variables affect rice production, statistical tests were carried out, through analysis of variance (F-test) and partial (T-test). Regressive analysis aims to show whether there is a significant linear relationship between the independent variable (X) and the dependent variable (Y). Where the decision making is as follows:

a) If F - count is smaller than F - table, then the X variable together has no effect on the Y variable, and vice versa if the F - count is greater than or equal to F table, then the X variables together have a significant effect on the level of confidence 95% of the Y . variable
b) If T - count is greater than or equal to T - table, then the X variable separately (other variables constant) has a significant effect on the 95% confidence level of the Y variable, and vice versa if T - count is greater than T - table, then each each variable X separately has no effect on variable Y.

4. RESULTS AND DISCUSSION

4.1 Research Descriptive

In accordance with the research objectives, namely to find out a description of the area of land, labor, aunts, fertilizers, pesticides and rice production of farmers and to determine whether or not there is an influence of land area, labor, seeds,

fertilizers and pesticides on rice production in Barugae Village, Mallawa Regency. Maros. Then the data obtained from filling out the questionnaire was then analyzed through two stages, namely descriptive data and statistical tests.Descriptive analysis aims to provide an explanation of each variable, while statistical tests are used to test hypotheses. The description of each variable in this study, namely land area, labor, seeds, fertilizers, pesticides and rice production of farmers in Barugae Village, Mallawa District, Maros Regency can be known from descriptive analysis. The analysis of each of these variables is ah:

a. Land area

An overview of the land area in Barugae Village, Mallawa District, Maros Regency. Based on the questionnaire of each respondent, the results are summarized in the following table:

Table 4.2
Variables of Land Area for Rice Farmers

Land Area (are)	Frequency (person)	Percentage %
50 are	10	33
40 are	9	30
20 are	5	17
< 15 are	6	20
Total	30	100

Source: Data processed, Year 2021

Based on the table above shows that there are 10 farmers who stated that the factor of land area owned was 50 acres (33%). There are 9 farmers who own 40 acres of agricultural land (30%). Furthermore, there are 5 farmers whose agricultural area is included in 20 acres (17%). While the farmers' agricultural land area which is <15 acres, there are 6 farmers (20%).

b. Labor

Based on the results of the study, it is shown that in general, the workforce working in the agricultural sector (paddy rice) in Barugae Village is very much different. The labor factor used is 2 8 farmers who use 1-2 farmers (93%), who use 3-4 workers there are 2 farmers (7%) . While the labor factor used by farmers is between 5-6, (0%) and more than 6 is (0 %). Therefore, it can be seen in the table below:

Table 4.3 Labor Variables

Labor (Soul)	Frequency (person)	Percentage %
1-2	28	93
3-4	2	7
5-6	0	0
>6	0	0
Total	30	100

Source: Data processed, Year 2021

c. Seeds

The results showed that the seeds used by rice farmers in general used seeds from the previous harvest. The categories of use of seeds used by respondents are shown as follows:

Table 4.4
Seed Variables

Number of Seeds	Frequency (person)	Percentage %
<5 kg	5	17
10 kg	1	3
15 kg	0	0
>20 kg	2 4	80
Amount	30	100

Source: Data processed, Year 2021

As the table above shows, the seed factor in the rice farming sector in Barugae Village, Mallawa District, Maros Regency shows that the use of seeds is less than <5 kg as many as 5 farmers (17%), 10 kg there is 1 farmer (3 %) 15 kg, 0 farmers (0 %), while > 20 kg there are 2 4 farmers (80 %)

who use seeds of .

d. Fertilizer

From the research results for the fertilizer variable, the data can be presented as follows:

Table 4.5
Fertilizer Variables

Amount of Fertilizer	Frequency (person)	Percentage %
<50 kg	0	0
80 kg	1	3
100 kg	7	2 4
>150 kg	22	73
Amount	30	100

Source: Data processed, Year 2021

The table above shows that the fertilizer factor in the rice agricultural sector shows that less than <50 kg of fertilizer yields are not used by farmers farmer (0 , 0 %), 80 kg is used by 1 farmer (3.3 %), there are 100 kg used by 7 farmers (2 3.3%), >150 kg is used by 22 farmers (73.3 %) .

e. Pesticide

From the results of research for pesticide variables can be described in the table below:

Table 4.6
Liquid Pesticide Variable

Amount of Pesticide Liquid	Frequency (person)	Percentage %
<250 ml	3	10
250-499 ml	11	3 7
500-749 ml	4	13
>750 ml	12	40
Amount	30	100

Source: Data processed, Year 2021

From the table above shows that the liquid pesticide factor used by rice farmers is less than <250 ml, there are 3 farmers (10, %), while 25 0 -499 ml are used by 11 farmers (3 7 %), then 500-749 ml is used by 4 farmers (13%), and 12 farmers for use more than >750 ml (40.00%).

f. Production

The results obtained by researchers for farmer production variables show the following data:

Table 4.7
Production of Rice Farmers

Production(kw)	Frequency (person)	Percentage %
<4 kw	1	3
5 kw	0	0
8 kw	11	3 7
> 1 0 kw	18	60
Amount	30	100

Source: Data processed, Year 2021

Based on table 4.6 above, the results of descriptive research for farmer production variables show that 1 farmer (3%) whose production is less than <4 kw. Furthermore, 5 kw does not exist (0%), and 1 1 farmer (3 7 %) which states that their rice production is between 8 kw. For production of more than 10 kw there are 18 farmers or (6 0%).

It shows that most of the farmers' rice production in Barugae Village, Mallawa District, Maros Regency is included in the production of >10 kw. This shows that in general the rice farmers there can get satisfactory results from the rice farming they do. Based on the low production obtained less than <4 kw, it can be concluded that rice farming cultivated by farmers in Barugae Village, Mallawa District, Maros Regency can not be used as the main livelihood that can support the family life of the farmers as a whole so that farmers still need effort. others to support their family.

g. Characteristics of Respondents

1) By Age

Based on the results of the research, it was found that the average age of farmers in Barugae Village, Mallawa District, Maros Regency varied widely, ranging from 19 to 75 years.

Table 4.8
Characteristics of Respondents Based on Age

No	Respondent's Age	Frequency (person)	Percentage (%)
1	19-29	3	10
2	30-49	15	50
3	50-69	10	33
4	70-80	2	7
	Amount	30	100

Source: Data processed, year 2021

Based on the table. 4.8 above shows that the most rice farmers in Barugae Village, Mallawa District, Maros Regency are aged 30-40 years, namely 15 people. The easiest farmers are 19-29 years old (3 people). 10 farmers aged 50-69 years. And rice farmers aged 70-80 years amounted to (2 people).

2) Based on Education

The level of education achieved by most rice farmers in Barugae Village, Mallawa District, Maros Regency is the level of elementary and high school education.

Table 4.9
Characteristics of Respondents Based on Education

No	Education Graduate	Frequency (person)	Percentage (%)
1	No school	0	0
2	SD	12	40
3	JUNIOR HIGH SCHOOL	6	20
4	SENIOR HIGH SCHOOL	12	40
	Amount	30	100

Source: Data processed. year 2021

Based on table 4.9, farmers with the last education of elementary school are 12 people, farmers who have the last education of junior high school are 6 people, farmers who have the last education of high school are 12 people and farmers who don't go to school are 0 or none and a total of 30 respondents. Most of the respondents last educated elementary, junior high, high school. This happens because of limited funds to continue education to a higher level.

h. Multiple Linear Regression Equation

Multiple linear regression equation can be used to see the relationship of one variable rice production (Y) and variable area of land (X1), labor (X2), seeds (X3), fertilizer (X4), pesticides (X5). This study aims to determine the effect of land area, labor, seeds, fertilizers and pesticides on the production of rice farmers in Barugae Village, Mallawa District, Maros Regency. The analytical tool used is the *SPSS 25 program.*

Table 4.10
Result of Multiple Linear Regression Equation

Coefficients [a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-9,488	2,473		-3,837	.001
	LAND AREA X1	.428	.123	.293	3.486	.002
	LABOR X2	2.161	.750	.167	2,883	.008
	SEEDS X3	.444	.143	.293	3.098	.005
	FERTILIZER X4	.032	.010	.374	3.111	.004
	PESTICIDE X5	-.006	.006	-.100	-.969	.341

a. Dependent Variable: RICE PRODUCTION Y

Source: SPSS output 25. processed data, 2021.

In accordance with table 4.8, the results of the multiple regression equation can be written as follows: **Y= -9.488 + 0.428X1 + 2.161X2 + 0.444X3 + 0.032X4 + -0.006X5.** The regression equation can be explained in detail as follows:

1. Constant Value (a) of -9.488

This means that if the land area (X1),

Labor (X2), Seeds (X3), Fertilizer (X4) and Pesticides (X5) are zero (0) or constant, the farmer's rice production (Y) is -9.488

2. Land area (X1) has a regression coefficient value of b1 = 0.428
   Shows the influence of the respondent's land area is positive and it means that if the respondent's land area increases by 1%, the growth of farmers' rice production (Y) will increase by 0.428%. Assumptions of labor (X2), seeds (X3), fertilizers (X4), pesticides (X5) are considered constant.
3. Labor (X2) has a regression coefficient value of b2 = 2.161
   Showing that the influence of labor is positive, it means that if the workforce increases by 1%, the growth of farmers' rice production (Y) will increase by 2,161. The assumption of land area (X1), seeds (X3), fertilizers (X4), pesticides (X5) are considered constant.
4. Seeds (X3) have a regression coefficient value of b3 = 0.444
   Showing the effect of seeds is positive, meaning that if the seeds increase by 1%, the growth of farmers' rice production (Y) will increase by 0.444. The assumption of land area (X1), labor (X2), fertilizer (X4), pesticides (X5) are considered constant.
5. Fertilizer (X4) has a regression coefficient value of b4 = 0.032
   Shows that the effect of fertilizer is positive, meaning that if the fertilizer is increased by 1%, the farmer's rice production (Y) will increase by 0.032. The assumption of land area (X1), labor (X2), seeds (X3), pesticides (X5) are considered constant.
6. Pesticide (X5) has a regression coefficient value of b5 = -0.006
   Shows the effect of pesticides has a negative effect. This means that if the use of excessive doses on rice growth will cause damage and a decrease in farmers' rice production by -0.006. The assumption of land area (X1), labor (X2), seeds (X3), fertilizer (X4) are considered constant.

i. Hypothesis testing

1) Partial Test (t Test)

The calculated t value is used to test the partial effect of the variable Land Area (X1), Labor (X2), Seeds (X3), Fertilizer (X4), Seeds (X5) on the Rice Production variable (Y) whether the variable has an influence on the variable production or not with an error rate of 5% in the testing process carried out in this study by looking at the comparison of t *count* with t *table* where the value of t table

= (NK-1)
= (30-6-1) = 23

The decision-making criteria are as follows:

1. If the value of t *arithmetic* > t *table* then the independent variable has an effect on the dependent variable.
2. If the value of t *arithmetic* < t *table* then the independent variable has no effect on the dependent variable.

Table 4.11
Partial Test Results (t Test)

Coefficients [a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-9,488	2,473		-3,837	.001
	LAND AREA X1	.428	.123	.293	3.486	.002
	LABOR X2	2.161	.750	.167	2,883	.008
	SEEDS X3	.444	.143	.293	3.098	.005
	FERTILIZER X4	.032	.010	.374	3.111	.004
	PESTICIDE X5	-.006	.006	-.100	-.969	.341
a. Dependent Variable: RICE PRODUCTION Y						

Source: SPSS output 25. processed data, 2021.

Based on the t-test table above using the SPSS version 25 program. So for hypothesis testing independent variables, namely:

a) Hypothesis of Effect of Variable Land Area (X1) on Rice Production (Y)

The significant value for the variable land area (X1) on rice production (Y) is 0.002 <0.05 and the t - *count value* is 3.486 > t *table 2.068* , thus t has a significant effect between land area (X1) and rice production (Y) The t- *count* results were obtained in Barugea Village, Mallawa District, Maros Regency.

b) Hypothesis of the Effect of Labor Variables (X2) on Rice Production (Y)

The significant value for the labor variable (X2) on rice production (Y) is 0.008 <0.05 and the t- *count value is* 2.883 > t *table 2.068* so t there is a significant effect between labor (X2) and rice production (Y) in get t - *count* in Barugae Village, Mallawa District, Maros Regency.

c) Hypothesis of the Effect of Seed Variables (X3) on Rice Production (Y)

The significant value for the seed variable (X3) on rice production (Y) is 0.005 <0.05 and the t - *count value* is 3.098 > t *table 2.068* so t there is a significant effect between seeds (X3) and rice production (Y) is obtained t *count* in Barugae Village, Mallawa District, Maros Regency.

d) Hypothesis of the Effect of Fertilizer Variable (X4) on Rice Production (Y)

The significant value for the fertilizer variable (X4) on rice production (Y) is 0.004 <0.05 and the t- *count value is* 3.111 > t *table 2.068* so t there is a significant effect between fertilizer (X4) and rice production (Y) is obtained t *count* in Barugae Village, Mallawa District, Maros Regency.

e) Hypothesis of the Effect of Pesticide Variables (X5) on Rice Production (Y)

The significant value for the pesticide variable (X5) on rice production (Y) is 0.341 > 0.05 and the t value is *-969* < t *table 2.068.* Thus, t has no significant effect on rice production (Y) in Barugae Village, Mallawa District, Maros Regency.

2) Equation Test (F Test)

Test the hypothesis together (Test F) between the independent variables in this case between land area (X1), labor (X2), seeds (X3), fertilizers (X4), pesticides (X5), and rice production (Y) . The results of the analysis together based on the results of the analysis with the help of the SPSS 25 program obtained the following results:

Table 4.12
Hypothesis Test (F Test)

ANOVA [a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7526,238	5	1505,248	815,665	.000 [b]
	Residual	47,981	26	1.845		
	Total	7574219	31			

a. Dependent Variable: RICE PRODUCTION Y

b. Predictors: (Constant), PESTICIDE X5, LAND AREA X1, LABOR X2, SEEDS X3, FERTILIZER X4

Source: SPSS output 25. data processed, 2021

Based on the results of SPSS 25 output, it can be seen in the ANOVA table above that it is known that the table f *count* is 815,665 with a significant value (sig) of the X variable together is 0.000. Because the significant value (sig) is 0.000 < 0.05 (5%), it can be concluded that the variable X simultaneously has a significant effect on rice production.

3) Coefficient of Determination Test (R^2)

The magnitude of the influence of land area, labor, seeds, fertilizers, pesticides on rice production in Barugae Village, Mallawa District, Maros Regency is known from the coefficient of simultaneous determination

(R^2) as follows:

Table 4.13

Coefficient of Determination Test Results (R^2)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.997 [a]	.994	.992	1.358
a. Predictors: (Constant), PESTICIDE X5, LAND AREA X1, LABOR X2, SEEDS X3, FERTILIZER X4				

Source: SPSS output 25. processed data, 2021

Based on table 4.11 above, it is obtained R^2 of 0.994, meaning that the data shows that the variation in the total percentage in variable Y (production) of rice farmers in Barugae Village, Mallawa District, Maros Regency which is explained by variable X (land area, labor, seeds, fertilizers, pesticides) together by 9.20%. Because R^2 is close to 1, the model is said to be good.

4.2 Discussion of Research Results

The discussion in this study is focused on the explanations that have been found and the theory that forms the basis for this research model.

The discussion of the results of the analysis in the study is as follows:

1. Effect of Land Area (X1) on Rice Production (Y)

The results of this study indicate that the variable area of land is an independent variable that has a positive and significant effect on rice production in Barugae Village, Mallawa District, Maros Regency. From the results of the regression calculations as in the equation above, it has shown consistency to the theory. In general it is said, the higher the area of land that is cultivated or planted, the greater the amount of production produced by the land.

The result of multiple linear regression calculation states that the land area factor has a significant effect on rice production at the 95% confidence level and the regression coefficient value is 0.428. The regression coefficient value of land area of 0.428 states that every 1% addition of land area will cause an increase in rice production of 0.428%. Conversely, if the land area is reduced by 1% it will cause a decrease in farmers' rice production by 0.428%, so to get an increase in farmers' rice production, it must be followed by an even larger increase in land area. The results of research conducted by Rusdiah Nasution (2008) with the title of the research book ''The Effect of Working Capital, Land Area and Labor'' from the results of his research show that land area has a positive and significant effect on rice farming income. Agricultural land is a determinant of the influence of agricultural commodities.

The area of agricultural land will affect farming. Judging from the previous previous studies above, it shows that the area of agricultural land tenure is very important in an agricultural business because the presence of land will result in a business activity that produces production.

The area of paddy production land in Barugae Village, Mallawa District, Maros Regency is 144.8 ha and includes a fairly wide criteria. Farmers in Barugae Village, Mallawa District, Maros Regency generally have a fairly wide land tenure. The land area discussed in this study is the unit Are.

2. The Effect of Labor (X2) on Rice Production (Y)

Based on the results of the research above, it shows that labor (X2) has a positive and significant effect on rice production. Labor can encourage increased production and these results have been able to strengthen the previous research conducted by Desky Syahroel (2007) with the research title ''Analysis of factors that affect rice production in Southeast Aceh Regency'' from the regression results which show that labor has an effect on positive

and significant to rice production. Labor has a very important role in encouraging increased production. Barugae Village, Mallawa District, Maros Regency has quite good potential, especially in the agricultural sector in supporting sustainable regional economic development. The influence of labor on rice production in Barugae Village, Mallawa District, Maros Regency.

One of the important factors in agricultural business is labor, especially family workers and their family members. If it can still be done by the family's own workforce, then there is no need to hire outside workers.

3. Effect of Seeds (X3) on Rice Production (Y)

The results of this study indicate that an increase or decrease in the use of seeds has a positive and significant impact on increasing rice production. From the results of the regression calculations as in the equation above, it has shown consistency to the theory, in general it is said, the more seeds used, the greater the amount of rice farmers produce. The regression results obtained strengthen the results of Bayu Murdiantoro's (2011) research. with the research title ''Factors Affecting rice production'' from the results of his research showed that seeds had a positive and significant effect on rice production.

4. Effect of Fertilizer (X3) on Rice Production (Y)

The results showed that the fertilizer variable had a positive and significant effect on farmers' rice production. Fertilizers have the raw materials needed for plant growth and development , while supplements such as plant hormones help smooth metabolic processes. Therefore, in fertilizers, especially artificial fertilizers, a number of supplementary materials can be added. In fertilization, it is necessary to pay attention to the needs of the plant, so that the plant does not get too much nutrients because it can be harmful to the plant. Fertilizer can be applied through the soil or sprayed onto the leaves.

From the results of the regression calculations above, it obtains and strengthens the results of previous studies, Dwicaksono, (2013). With the research title '' *The Effect of Adding Effective Microorganisms to the Liquid Waste of the Fishery Industry on the Quality of Organic Liquid Fertilizer''.* Fertilizer is the key to soil fertility because it contains one or more elements to replace the elements that are used up by plants. Therefore, fertilizing means adding nutrients to the soil and plants. Fertilizer is a material that is added to the planting medium or plants to meet nutrient needs needed for plants to be able to produce properly.

5. Effect of Pesticides (X5) on Rice Production (Y)

The results showed that the pesticide variable had a negative and insignificant effect on rice production. It can be seen in the results of the regression analysis that the t value is *-969* . From the results of the regression calculations above, it obtains and strengthens the results of previous studies by Runia Y (2008). With the research title *"Factors Associated with Organophosate Pesticide Poisoning, Carbamates and Anemia Incidence* ". Pesticides are chemicals used to kill pests, including insects, fungi and weeds. Pesticides are widely used for the purpose of controlling pests and plant diseases in agriculture. Pesticides can be used at home to get rid of mosquitoes, cockroaches and various other nuisance insects. On the other hand, this pesticide actually causes a lot of poisoning in people.

5. CLOSING

5.1 Conclusion

Based on the research, the results of the data analysis carried out and the discussions that have been put forward, the following conclusions are obtained:

1. Based on the results of data analysis and discussion that the variable land area, has a positive and significant effect on rice production because the higher the area of land owned by farmers, the higher the rice production will be.
2. Based on the results of data analysis and discussion that the labor variable has a positive and significant effect on rice production because more workers will encourage an increase in rice production.
3. Based on the results of data analysis and discussion that the seed variable has a positive and significant effect on rice production because the more seeds used, the more rice production is produced.
4. Based on the results of data analysis and discussion that the fertilizer variable has a positive and significant effect on rice production because the use of fertilizers can help the growth and development of rice plants so that it can increase rice production.
5. Based on the results of data analysis and discussion that the pesticide variable has a negative and insignificant effect on rice production because if the use of pesticides is not in accordance with the estimated dose it will cause damage to plants or can cause productivity results in rice plants to decrease.

5.2 Suggestion

Based on the discussion and conclusions, it can be described some suggestions or policies for local governments related to increasing rice production in Barugae Village, Mallawa District, Maros Regency.

Government

a. Efforts to increase rice production, by implementing a mechanism program that can stimulate the spirit of the easy generation to work in the agricultural sector.
b. In order to increase production yields, farmers must increase the use of their land by taking into account the productivity aspects of the land (soil type, land use, irrigation conditions, and infrastructure).
c. Efforts to use pesticides in rice production must be in accordance with the levels used because the more pesticides used can cause damage to the rice plant.

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