J-PEN Borneo: Journal of Agricultural Sciences
Volume VI, Number 10, October 2023
Pages: 86-98

E-ISSN: 2599-2872
P-ISSN: 2549-8150

THE ROLE OF MATTOANGING FARMER GROUP IN INCREASING MAIZE (*Zea mays*) PRODUCTION IN MASSEPE VILLAGE

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ABSTRACT

This study aims to determine the role of the Mattoanging farmer group in increasing maize production in the Massepe Village. This quantitative descriptive research uses a non-experimental approach with a survey type. The research using a questionnaire obtained an average percentage in learning classes 72.3%, in collaboration vehicles of 75.8%, and production units of 81.2%. After being analyzed using the Rank-Spearman Correlation, the correlation coefficient in the learning class was 0.678. In cooperative vehicles, it is 0.683; in production units, it is 0.654. These three values indicate a strong relationship with a positive direction. The significance value obtained from the three variables is below 0.05 (α = 5%). This means that H0 is rejected and H1 is accepted, which means that there is a significant relationship between the role of the Mattoanging farmer group as a learning class, a vehicle for cooperation, and a production unit in increasing maize production in Massepe Village, Tellu Limpoe District, Sidenreng Rappang Regency.

Keywords: Rank-Spearman Correlation, the role of farmer group, maize production

INTRODUCTION

Indonesia is an archipelago country and has very abundant natural wealth that makes Indonesia one of the countries that has enormous potential in the agricultural sector. The role of the agricultural sector in Indonesia's development can be seen from its contribution to the national economy. The agricultural sector consists of two major groups: rice and crop farming. Maize is one of the crops that farmers in Indonesia widely cultivate.

Maize (*Zea mays*) is Indonesia's second most crucial food commodity after rice, but maize is not the main product in the agricultural sector. Maize is one of the staple food crops consumed by most of the population besides rice, cassava, sweet potato, tales, and sago [1]. For Indonesia, the development of maize commodities is a strategic and economically valuable commodity. In recent years, the demand for maize has continued to increase, which should be used as a momentum to increase domestic production. Besides being the staple food of some Indonesian people, Maize also functions as animal feed and raw material for the food industry. As an intermediate product of rice cultivation, maize is also produced intensively in several regions in Indonesia, which are maize producers.

South Sulawesi is one of the central maize-producing provinces in Indonesia. Based on the prognosis report of the Ministry of Agriculture's Data Center and Information System Calculation [2], South Sulawesi province ranked fifth with a harvest area of 377.7 thousand. It produced 1.82 million tons of maize in 2020. Apart from being a maize producer, South Sulawesi is also a producer of chicken eggs that supply the Eastern Indonesia region.

Sidenreng Rappang Regency (Sidrap) is one of the largest production centers for laying hens (layers) in South Sulawesi. According to [3], Animal Feed Production is 19.4 Million Tons, and Maize needs for the Feed industry are 7.7 Million tons. This proves that the prospect of developing Maize processing for feed industry ingredients is promising. The need for maize will continue to increase

E-ISSN: 2599-2872
P-ISSN: 2549-8150

from year to year in line with the increase and progress of the animal feed industry, so efforts are needed to increase production through human and natural resources, land availability, and potential results and technology.

Most of Massepe Village, Tellu Limpoe District, and Sidrap Regency are maize farmers as their livelihood (besides the blacksmithing business). Massepe Village is very fortunate because it has a large area of land for agriculture. Most farmers grow maize, and some grow peanuts on their land. However, the land area promises little production results, especially in maize production. The main problem facing maize farmers is fluctuating production. Production that has not been maximized affects the farmers' economy and welfare; therefore, to increase this production, farming businesses are carried out through farmer groups as an effort to accelerate the target.

One of the institutions that developed to realize farmer self-help is the farmer group, a working group expected to function as an innovation for farmers. Farmer groups are a forum for farmers to manage farming businesses and all agricultural issues, a forum for the learning process for farmers in carrying out agricultural activities optimally and increasing production [4].

A farmer group is a communication institution between farmers whose existence has long been in Indonesia. Theoretically, a farmer group can be interpreted as a collection of several farmers with shared interests and goals in conducting agricultural business with informal attachments. One of the Government's efforts to increase agricultural productivity is to increase the role of farmer groups to support maize farming activities, in several villages and villages, farmer groups have been formed, each led by a farmer contact.

The Massepe Village community has formed several farmer groups, including the Mattoanging farmer group. The formation of this farmer group aims to improve farmers' ability to increase their agricultural productivity for the better. The Mattoanging farmer group annually receives assistance from the Government for its needs, such as seeds, fertilizers, and pesticides, in the form of subsidies.

This is the background of research entitled "The Role of the Mattoanging Farmer Group in Increasing Maize Production (*Zea Mays*) in Massepe Village, Tellu Limpoe District, Sidenreng Rappang Regency"

MATERIALS AND METHODS

Method

Research methods are scientific characteristics used to obtain data for specific purposes and uses [5]. The method used in this study is the quantitative descriptive method. [5] states that quantitative research methods are defined as research methods based on positivism, used to examine specific populations or samples, data collection using research instruments, and quantitative/statistical data analysis, with the aim of testing predetermined hypotension.

The approach used in this study is a non-experimental approach with the type of survey. In survey research, researchers ask several people (called respondents) about beliefs, opinions, characteristics of an object, and behavior that has been past or present..

Population and Sample

The population of this study is all members of the Mattoanging farmer group located in Massepe Village, Tellu Limpoe District, and Sidenreng Rappang Regency, which has a population of 50 people.

E-ISSN: 2599-2872
P-ISSN: 2549-8150

[6] suggests that if the subjects are less than 100, it is better to take all so that the research is a population study. In this study, looking at the population of 50 farmers, all members of the population were used as research samples. Therefore, the sample used for this study was 50 farmers.

Data Types and Sources

1. Primary data is data obtained directly from respondents or related parties regarding the problem to be studied. The primary data collection techniques are as follows:
   a. Observation
   b. Questionnaire (Questionnaire)
   c. Interview
   d. Documentation
2. Secondary data is data obtained from a second source that is not directly involved in the problem but supports research as supporting data. This data can be in the form of data or documents originating from parties related to research materials. The data obtained include maize production data, village profiles and the history of the Mattoanging farmer group which can be obtained at village agencies and heads of farmer groups.

Data Collection Techniques

Data collection techniques in survey research are carried out using questionnaires or questionnaires where the results will tend to be generalized. The questionnaire used in this study is a structured questionnaire form with a closed answer form, which is a questionnaire that provides several questions where each question has various alternative answers available. [7] explained that closed questionnaires are those presented in such a form that respondents are asked to choose one answer that suits their characteristics by giving a cross (x) or checklist mark (√).

The questionnaire used consists of 3 sub-variables where each consists of 5 statements. The overall number of statements in the questionnaire was 15 statements by providing alternative answers to choice 4: strongly agree", 3: "agree", 2: "disagree" and 1: "disagree".

Data Analysis Techniques

Descriptive Analysis

Descriptive analysis was used to provide an overview of the role of farmer groups on maize productivity in Massepe sub-district, Tellu Limpoe sub-district, Sidenreng Rappang district. In this study to determine the role of farmer groups and maize productivity using the *Likert Scale.* The *Likert scale* is used to measure the attitudes, opinions, and perceptions of a person or group of people about social phenomena [8]. Each indicator is given a score of 1 to 4.

1 : disagree
2 : disagree less
3 : agree
4 : Totally agree

The indicators used are taken based on the role of farmer groups as learning classes, cooperation vehicles, and production units. The results of the study produce a score, from which the score will be determined a percentage index of how to evaluate the role of farmer groups in the research area.

$$\text{Percentage index (\%)} = \frac{\text{Total skor}}{\text{Skor maksimal}} \text{ x } 100$$

Max score = *Maximum weight x Total respondents*

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P-ISSN: 2549-8150

Table 1. Role Tiers

Role Level	Interval
Instrumental	80% - 100%
Role	60% - 79,99%
Enough to play a role	40% - 59,99%
Lack of role	20% - 39%
Out of play	0% - 19,99%

Source: Primary Data, 2023.

To test Variable Y, namely the productivity of maize farming, the following productivity formula is used:

$$\text{Productivity} = \frac{\text{Total produksi (Ton)}}{\text{Total Luas Lahan (Ha)}}$$

Meanwhile, to measure the level of productivity of maize farming in the Mattoanging farmer group, which includes the categories of "high", "medium", and "low", the interval is determined first.

$$\text{Interval} = \frac{\text{Nilai tertinggi} - \text{Nilai terendah}}{3}$$

Table 2. Productivity Levels

Productivity Level	Interval
Tall	2,6 – 3,1
Keep	2,0 – 2,5
Low	1,4 – 1,9

Source: Primary Data, 2023.

Research Instrument Test

a. Validity Test

A test is called valid if the test is able to measure what it wants to measure. According to [8] said that if the instrument is said to be valid it means that the measuring instrument used to obtain the data is valid so that it is valid means that the instrument can be used to measure what should be measured. The validity value is calculated using the Product-Moment correlation formula using the raw score formula:

$$rxy = \frac{n(\Sigma XY) - (\Sigma X\, \Sigma Y)}{\sqrt{[n\, \Sigma X^2 - (\Sigma X)^2][n\, \Sigma Y^2 - (\Sigma Y)^2]}}$$

Information:
rxy = Correlation coefficient between variables X and Y
n = Number of respondents
X = Statement score
Y = Total score of statements
Distribution (r table) α = 0.05 and degrees of freedom (dk = n - 2)
Rules of decision:
If R counts > R table is valid, vice versa
If R counts < R table means it is invalid

b. Reliability Test

According to [9] Reliability equals consistency or reliability. A research instrument is said to be reliable if the research instrument has consistent results in measuring what is to be measured.

E-ISSN: 2599-2872
P-ISSN: 2549-8150

The more reliable a test has requirements, the more confident we can state that the test results have the same results when retaken.

In this study reliability test using *Maizebach Alpha* because this instrument research uses questionnaires then the formula [9]:

$$r11 = \left(\frac{k}{k-1}\right)()1 - \frac{\Sigma\sigma t^2}{\sigma t^2}$$

Information:
r11 = Reliability Value
k = Number of question items
$\sum t2\sigma$ = Number of grain variances
$\sigma t2$ = Total variance

In the alpha cronback technique, an instrument can be said to be reliable if it has a reliability or alpha coefficient of 0.6 or more [10].

c. Test the hypothesis

To solve the second problem, namely looking at the relationship between farmer groups and maize farmer production using Spearman Rank correlation analysis with the following formula:

$$rs = 1 - \frac{6\sum d^2}{n(n^2-1)}$$

Information:
rs = Spearman Coefficient Value
d2 = Difference of rank pairs
n = Number of rank pairs
6 = Constant number

To determine the significance of the correlation (relationship) between the role of farmer groups and the production of maize farmers using the t test with the following formula:

$$\boldsymbol{t = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}}$$

Information:
r = Correlation coefficient
r2 = Coefficient of determination
n = Sample
t = t value calculate the search

Test Criteria

If the calculation ≥ rtable, then Ho is rejected Ha accepted
If the calculation < rtable, then Ho accepted Ha rejected
The table can be seen in the Spearman rank test table which contains various n and level α

Strength of Correlation

0.000-0.199 = Very weak
0.200-0.300 = Weak
0.400-0.599 = Medium
0.600-0.799 = Strong
0.800-1.000 = Very Strong

Correlation Direction

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Volume VI, Number 10, October 2023
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E-ISSN: 2599-2872
P-ISSN: 2549-8150

+ = Unidirectional, the greater the value of xi the greater the value of yi
- = In the opposite direction, the greater the value of xi the smaller the value of yi, and vice versa.

RESULT AND DISCUSSION

Study Classes

The following results of the variable frequency distribution of learning classes (X1) are shown in the following table:

Table 3. Results of Learning Class Variable Distribution

Indicators	Totally Agree (Weight 4)		Agree (Weight 3)		Disagree Less (Weight 2)		Disagree (Weight 1)	
	Number (People)	%	Number (People)	%	Number (People)	%	Number (People)	%
P1	11	22	24	48	9	18	6	12
P2	11	22	23	46	15	30	1	2
P3	14	28	26	52	9	18	1	2
P4	11	22	22	44	14	28	3	6
P5	13	26	22	44	12	24	3	6
Average	**24%**		**46,8%**		**23,6%**		**5,6%**	

Source: Primary Data, 2023.

In general, farmer groups voted "agree" with an average percentage of 46.8%. Then the average percentage between "strongly agree" and "disagree" is almost the same, which is only a difference of 0.4% where those who say "strongly agree" as much as 24% while those who choose "disagree" as much as 23.6%. The average percentage of respondents who voted "disagree" was only 5.6%.

To determine the level of role of farmer groups in the learning class variable (X1), the data are presented in the following table

Table 4. Assessment of Learning Class Variable Respondents

Variable	Indicators	Level of Role of Farmer Groups		
		Weight	Percentage (%)	Information
Study classes	P1	140	70	Role
	P2	144	72	Role
	P3	153	76,5	Role
	P4	141	70,5	Role
	P5	145	72,5	Role
Total		723	361,5	**Role**
Average			**72,3%**	

Source: Primary Data, 2023.

From the table data above, it can be seen that the role of farmer groups as learning classes based on respondents' assessments is included in the "playing a role" category. The respondents' assessment of the learning class conducted by the Mattoanging farmer group in Massepe Village, Tellu Limpoe District, Sidenreng Rappang Regency, showed an average percentage score of 72.3%. These results illustrate that the Mattoanging farmer group as a learning class increases maize production in Massepe Village, Tellu Limpoe District, Sidenreng Rappang Regency.

Cooperation Vehicle

The following is the result of the variable frequency distribution of the cooperation vehicle (X2) as shown in the following table

Based on the table below, data in the form of an average percentage showed that 32% of respondents expressed "strongly agree" while respondents who voted "agree" as much as 44%. As for respondents who expressed "disagree" as much as 19.2% and there were 4.8% of respondents who chose "disagree".

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Volume VI, Number 10, October 2023
Pages: 86-98

E-ISSN: 2599-2872
P-ISSN: 2549-8150

Table 5. Frequency Distribution of Cooperation Vehicles

Indicators	Totally Agree (Weight 4)		Agree (Weight 3)		Disagree Less (Weight 2)		Disagree (Weight 1)	
	Number (People)	%	Number (People)	%	Number (People)	%	Number (People)	%
P1	19	38	17	34	12	24	2	4
P2	12	24	28	56	7	14	3	6
P3	14	28	24	48	9	18	3	6
P4	16	32	20	40	13	26	1	2
P5	19	38	21	42	7	14	3	6
Average	**32%**		**44%**		**19,2%**		**4,8%**	

Source: Primary Data, 2023.

To determine the level of role of farmer groups in variable X2 as a vehicle for cooperation, the following data is presented in the form of a table.

Table 6. Respondent Assessment of Cooperation Vehicle Variables

Variable	Indicators	Level of Role of Farmer Groups		
		Weight	Percentage (%)	Information
Cooperation vehicle	P1	153	76,5	Role
	P2	149	74,5	Role
	P3	149	74,5	Role
	P4	151	75,5	Role
	P5	156	78	Role
Total		758	379	**Role**
Average			**75,8%**	

Source: Primary Data, 2023.

The table data above shows that the role of farmer groups as a vehicle for cooperation based on respondents' assessments is included in the category of "playing a role". Respondents' assessment of the cooperation vehicle conducted by the Mattoanging farmer group in Massepe Village, Tellu Limpoe District, Sidenreng Rappang Regency, showed an average percentage value of 75.8%. These results illustrate that the existence of the Mattoanging farmer group as a vehicle for cooperation plays a role in increasing maize production in Massepe Village, Tellu Limpoe District, Sidenreng Rappang Regency.

Production Unit

The following is the result of the variable frequency distribution of production units (X3) as shown in the following Table

Table 7. Frequency Distribution of Production Units

Indicators	Totally Agree (Weight 4)		Agree (Weight 3)		Disagree Less (Weight 2)		Disagree (Weight 1)	
	Number (People)	%	Number (People)	%	Number (People)	%	Number (People)	%
P1	19	38	25	50	5	10	1	2
P2	22	44	20	40	7	14	1	2
P3	21	42	20	40	8	16	1	2
P4	21	42	21	42	6	12	2	4
P5	23	46	21	42	4	8	2	4
Average	**42,4%**		**42,8%**		**12%**		**2,8%**	

Source: Primary Data, 2023.

Based on the table above, it was found that in general, farmer groups chose "agree" with an average percentage of 42.8%. Then the average percentage between "agree" and "strongly agree" is almost the same, only a difference of 0.4% where those who say "strongly agree" as much as 42.4%. The average percentage of respondents who voted "disagree" was 12% while those who voted "disagree" were 2.8%.

To determine the level of role of farmer groups in the variable production unit (X3), the data are presented in the following table

J-PEN Borneo: Journal of Agricultural Sciences
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E-ISSN: 2599-2872
P-ISSN: 2549-8150

The table data below shows that the role of farmer groups as production units based on respondents' assessments is included in the category of "very role". This is different from the role of the two previous variables. Respondents' assessment of production units carried out by the Mattoanging farmer group in Massepe Village, Tellu Limpoe District, and Sidenreng Rappang Regency showed an average percentage value of 81.2%. These results illustrate that the existence of the Mattoanging farmer group as a production unit plays a role in increasing maize production in Massepe Village, Tellu Limpoe District, and Sidenreng Rappang Regency.

Table 8. Assessment of respondents as a unit of production

Variable	Indicators	Level of Role of Farmer Groups		
		Weight	Percentage (%)	Information
Production units	P1	162	81	Instrumental
	P2	163	81,5	Instrumental
	P3	161	80,5	Instrumental
	P4	161	80,5	Instrumental
	P5	165	82,5	Instrumental
Total		812	406	**Instrumental**
Average			**81,2%**	

Source: Primary Data, 2023.

Farm Productivity

The productivity of maize farming in this study according to the formula is the result of dividing the total production by land area (Ton / Ha). The results of the distribution of research instruments in the form of questionnaires are presented in the following table

Table 9. Maize Production Data of Mattoanging Farmer Group

Indicators	Totally Agree (Weight 4)		Agree (Weight 3)		Disagree Less (Weight 2)		Disagree (Weight 1)	
	Number (People)	%	Number (People)	%	Number (People)	%	Number (People)	%
P1	11	22	23	46	15	30	1	2
P2	14	28	18	36	16	32	2	4
P3	10	20	22	44	17	34	1	2

Source: Primary Data, 2023.

The table above shows that 11 respondents (22%) strongly agree that maize production in quantity has increased yearly. Meanwhile, 23 respondents (46%) agreed with the increase in numbers in production. Meanwhile, 15 respondents (30%) chose not to agree, and 1 person (2%) expressed disapproval. Regarding the quality of maize production in the Mattoanging farmer group, there were(28%) who said strongly agreed that the production quality had improved. There were 18 respondents (36%) who voted in favor. While those who voted disagreed, as many as 16 people (32%) and only 2 people (4%) who voted disagreed. Meanwhile, in terms of production continuity, 10 respondents (20%) strongly agreed that maize production is carried out sustainably. There were 22 respondents (44%) who agreed with the sustainability of production. While those who chose to disagree, as many as 17 respondents (34%) and only 1 respondent (2%) who chose not to agree.

The distribution of maize production data in 2023 and the land area of farmer group members are presented in the following table.

Table 10. Maize Productivity of Mattoanging Farmer Group

Total Production (Ton)	Land (Ha)	Productivity (Ton/Ha)
103.96	44.92	2.31

Source: Primary Data, 2023

Based on the table above, it shows that in the results of this study, the total maize production from members of the Mattoanging farmer group was obtained at 103.96 tons and a land area of 44.92

E-ISSN: 2599-2872
P-ISSN: 2549-8150

hectares. Therefore, the productivity value of maize farming is 2.31 tons / ha.

To find the level of production categories that include "high", "medium", and "low", the following formula is used

$$\text{Interval} = \frac{3.19 - 1.41}{3} = \frac{1.78}{3} = 0.6$$

Based on the table below, it was obtained that as many as 16 respondents (32%) had maize productivity at a "high" level. While as many as 23 respondents (46%) with maize productivity at the "medium" level. On the other hand, as many as 11 respondents (22%) have maize productivity at a "low" level.

Table 11. Predictivity Level of Mattoanging Farmer Group

No.	Productivity Level (Ton/Ha)	Number of Respondents (People)	Percentage (%)
1.	Tall	16	32
2.	Keep	23	46
3.	Low	11	22
Total		**50**	**100**

Source: Primary Data, 2023.

Test Data Validity and Reliability

The validity test is carried out by comparing the calculated r value of the relevant value or research variable with the r value of the table. The validity of the questionnaire depends on the r count > r table, then the statement submitted in the questionnaire is valid and vice versa, if r count < r table then the statement submitted in the questionnaire is invalid. The results of validity testing on this research variable were processed in *the SPSS 22 for Windows* application and the results are as follows

Table 12. Validity Test Data Results

Variable	Indicators	R Calculate	R Table	Information
Study classes	P1	0,82	0,2353	Valid
	P2	0,73		
	P3	0,65		
	P4	0,78		
	P5	0,78		
Cooperation vehicle	P1	0,81		
	P2	0,68		
	P3	0,84		
	P4	0,82		
	P5	0,86		
Production units	P1	0,74		
	P2	0,57		
	P3	0,72		
	P4	0,73		
	P5	0,68		

Source: SPSS 22 For Windows.

The results of the instrument validity test in this study show that the calculated r value of each item of each variable is above the table r value (0.2353) meaning that the calculated r value is greater

E-ISSN: 2599-2872
P-ISSN: 2549-8150

than the table r (r count > r table). Of the 60 questionnaires that have been distributed, all of them are valid.

A reliable instrument means that the instrument used is trustworthy and reliable, so that the results of the instrument are consistent and can be used for the same research many times. In addition, reliability tests use the *Cronbach Alpha* technique, if the reliability coefficient or alpha of an instrument is greater than 0.6 then it can be said to be a reliable instrument. The results of reliability testing on this research variable were processed in *the SPSS 22 for Windows* application and the results are as follows

Table 13. Reliability Data Test Results

Variable	Value	Cronbach Alpha	Information
Study classes	0,8096		
Cooperation vehicle	0,6689	0,6	Reliable
Production units	0,7247		

Source: SPSS 22 For Windows.

Correlation Test

Using the Spearman Rank correlation analysis technique to statistically analyze the correlation between learning class variables, cooperation vehicles and production units with maize farming productivity. Based on the results of calculations with the help of the *SPSS 22 for Windows program* can be known the value of the correlation coefficient and the level of significance of each variable. The following test results are obtained in tabular form

Table 14. Correlation Coefficient Test Results Data

Variable	Correlation Coefficient	Sig. (p-value)	α = 5%	Information
Learning class (X1)	0,678	0,000		
Cooperation vehicle (X2)	0,683	0,000	0,05	Significant
Production unit (X3)	0,654	0,000		
Productivity (Y)				

Source: SPSS 22 for Windows.

Based on the data above, the correlation coefficient for X1 and Y is 0.678. This indicates a strong level of association with the direction of a positive relationship. The significant value obtained is 0.000 or the probability is below 0.05. In addition, for X2 and Y obtained a correlation coefficient of 0.683 which means that the degree of relationship is strong with a positive direction. The significant value obtained is 0.000 or the probability is less than 0.05. Then the correlation coefficient for X3 and Y is 0.654. This indicates a strong degree of association with a positive direction. The significant value obtained is below 005. This means that H0 is rejected, which means that there is a significant relationship between the role of the Mattoanging farmer group and the increase in maize production in Massepe Village, Tellu Limpoe District, Sidenreng Rappang Regency.

Study Classes

Based on the research above, results were obtained that align with the results of research conducted by [11] in his journal, which stated that the learning class variables based on respondent assessments were suitable. The farmers agreed that this learning class existed. These results can illustrate the role of farmer groups in improving the knowledge, skills, and attitudes of farmer group members. The increase in knowledge, skills, and attitudes of farmers is because farmer groups often receive counseling from BP3K and related agencies regarding the use of technology, seeds, pest control, and the manufacture of organic fertilizers. Thus, with farmer groups, farmer knowledge also increases, and farmers can take a stand in their farming.

E-ISSN: 2599-2872
P-ISSN: 2549-8150

Meanwhile, according to [12], with farmer groups, member farmers can interact deliberately either by sharing experiences or solving problems about farming. [13] stated that farmer groups are forums for gaining additional knowledge. Farmer groups in the learning class contribute to maize production in each growing season.

Cooperation Vehicle

Based on the results of the research above, results were obtained that are in line with the results of research conducted by [14] in his journal which stated that the variables of cooperation vehicles based on respondents' assessments were good. The farmers agree that this cooperation vehicle can be carried out. These results illustrate the role of farmer groups in collaborating with related institutions or other farmer groups. Increased cooperation by farmer groups with related institutions certainly has an impact on increasing farm productivity.

On the other hand, according to [13] stated that with the cooperation system between farmers can improve and accelerate the process and tillage, planting seeds, and harvesting maize. With the vehicle for mutual cooperation, farmers can reduce farm expenditure funds, thus with the existence of mutual cooperation, farmers can play an active role in farming without using large enough capital.

Production Unit

This is in line with the results of research conducted by [14] in his journal which states that the variable of production units based on respondents' assessments is good. Farmers agree that production units can support farmers' performance. These results illustrate the role of farmer groups as production units. As a production unit, farmer groups in this study have carried out their roles in terms of planning units, production facilities provider units, processing and marketing units. Unit planning is carried out such as, planting time, seed use, and pest control. Farmer groups also through their cooperation provide production facilities such as seeds, fertilizers, and pesticides that can be obtained by farmers at lower prices. While the processing and marketing units are still carried out collectively by farmers but in accordance with prices that develop in the market. Good utilization of production units can certainly have an impact on increasing farm productivity.

Meanwhile, according to [15], this farmer group also collaborates in providing production facilities such as seeds, fertilizers, and pesticides that can be obtained by farmers at low prices, while processing and marketing units are still carried out collectively by farmers in accordance with prices that develop in the market, good use of production units can have an impact on increasing the productivity of farmers in the village.

Meanwhile, according to [13] production units in farmer groups, farmers get assistance from the Agriculture Office such as Pioner33 superior seeds, NPK Ponska fertilizer, UREA, SP36 and agricultural machinery tools such as maize sheller machines. In addition, production units can be developed by learning from agricultural extension to farmers, by means of agricultural extension teaching how to make superior seeds well and also making trainings to farmers.

Farm Productivity

Based on the results of data from the field, it can be concluded that the productivity of maize farming in Massepe Village has a fairly high productivity yield, however, it is still below the productivity level in Sidenreng Rappang Regency, which is 5.21 tons per ha. In this case, it is necessary to increase the role of farmer groups as learning classes, cooperation vehicles, and production units to increase the productivity of maize farming from 2.31 tons per ha to achieve the

E-ISSN: 2599-2872
P-ISSN: 2549-8150

highest productivity of 5.21 tons per ha.

This is in line with research from [14] which states that the amount of production from before becoming a member of a farmer group to after becoming a member of a farmer group has increased, this is due to a better maintenance system than before, farmers after joining a farmer group better understand if plants are well cared for it will result in higher production. In addition, because of the more active group members in participating in meetings so that more knowledge is obtained, actively collaborating in groups and between other farmer groups, and actively seeking information about prices in the market.

While on the other hand, theoretically with the participation of farmers as members of farmer groups whose activities as learning classes, cooperation vehicles and production units, should be able to increase productivity, but in reality not completely, because the high and low are influenced by the high and low production achieved per hetarnya, and the high and low production other than by internal factors of farmers is also influenced by external factors of farmers or factors beyond the ability of farmers [15].

CONCLUSION

The role of farmer groups as learning classes and vehicles for cooperation based on respondents' assessments is included in the category of "playing a role". This is shown by the results of the average percentage value of 72.3% and 75.8%. Meanwhile, the role of farmer groups as production units based on respondents' assessments is included in the category of "very important". This is indicated by the result of a percentage average value of 81.2%. The correlation coefficients obtained are 0.678, 0.683, and 0.654 respectively which indicate a strong level of relationship with the direction of a positive relationship. In addition, the significance value obtained from the three variables is below 0.05 (α= 5%). This means that H0 is rejected and H1 is accepted, which means that there is a significant relationship between the role of the Mattoanging farmer group as a learning class, cooperation vehicle, and production unit to increase maize production in Massepe Village, Tellu Limpoe District, Sidenreng Rappang Regency.

Therefore, it can be concluded that the Mattoanging farmer group plays a role in increasing maize production in Massepe sub-district, Tellu Limpoe sub-district, Sidenreng Rappang regency.

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