THE INFLUENCE OF FARMER GROUP PERFORMANCE ON LOWLAND RICE FARMING INCOME IN PASIRAN VILLAGE GEBANG SUB-DISTRICT

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Abstract

This study aims to analyze the level of performance of farmer groups' income of paddy rice farming and to find out whether the performance of farmer groups affects the income of lowland rice farming in Pasiran Village, Gebang District, Langkat Regency. The sample determination method used in this study was simple random sampling with 37 Pasiran Village farmer group members. The data used in this study are primary data and secondary data. Preliminary data was obtained through observation, interviews, and questionnaires, while secondary data was obtained through journals, books, and the Agricultural Extension Agency, Gebang District. The data analysis method used in this study is a Likert scale, income analysis, and simple linear regression. The results showed that the average score of the performance level of farmer groups was 80.94, meaning that the performance level of farmer groups was moderate, the average income of lowland rice farming was IDR 2,262,655/planting season, and the performance of farmer groups did not affect lowland rice farming income.

Keywords: Farmers Group; Income; Lowland Rice; Performance

INTRODUCTION

The food crops sub-sector is a sub-sector that has an essential and strategic role in building food security and maintaining national stability through agricultural development. Agricultural development is a process aimed at constantly increasing the farm production of each consumer. Agricultural development seeks to increase farmers' welfare and food security through increased productivity to increase farmers' income. The success of agricultural development is inseparable from the institutional performance of farmer groups in rural areas (Makikendage et al., 2022). Regulation of the Minister of Agriculture Number 82 of 2013 concerning Guidelines for Farmer Institutional Development states that farmer groups are groups of farmers/breeders/planters formed based on shared interests, similar environmental conditions (social, economic, resource), and familiarity to improve and develop members' businesses. Farmer institutional development is directed at changing the mindset of farmers in implementing agribusiness systems and fostering farmer groups in carrying out their roles.

The role of farmer groups is learning classes, vehicles for cooperation, and production units. The farmer group program aims to develop the knowledge and insights of farmers so that they can find solutions to the problems they face independently, for example, issues with capital, management, marketing, lack of understanding in the field of technology, and the lack of creativity of farming communities (Wahyurini and Hamidah, 2020). However, not all farmer groups play the role they should, causing farmer group members not to feel the benefits of being in groups. Farmer groups are currently

only a tool to facilitate the implementation of government tasks in distributing production inputs to farmers so that they are more coordinated (Mawarni et al., 2017). Therefore, farmer groups scattered throughout the countryside must be further improved and empowered to play an optimal role.

Pasiran Village is one of the villages in Gebang District, Langkat Regency, North Sumatra, where most of the population work as paddy rice farmers and have active farmer group institutions. The lowland rice farmer groups are spread over 4 of the seven hamlets in Pasiran Village: Hamlet I Pasiran Timur, Hamlet II Pasiran Barat, Hamlet III Mendilingan, and Hamlet IV Bukit Salak, totaling 148 people for the East Pasiran I Hamlet farmer group, namely the Jaya farmer group, destroying 16 people, the West Pasiran II Hamlet farmer group, namely the Kuntum Mekar farmer group, numbering 20 people and the Sadar farmer group totaling 28 people, the Dusun III Mendilingan farmer group, namely the the Sehati farmers totaling 37 people and the Sekata farmer group totaling 15 people and the Dusun IV Bukit Salak farmer group, namely the Serasi farmer group totaling 32 people.

Generally, farmers become members of farmer groups of their own free will, hoping that grouping will make it easier for farmers to manage and develop their farming businesses to increase income. The success of achieving the goal of increasing the income of paddy rice farmers is influenced by the performance of farmer groups. Performance is the result of work that has been done by the community per the terms of employment, where the terms of work are usually called work standards, namely the expected level of a particular job to be completed and compared to the goals or targets to be achieved (Bangun, 2012).

The performance of farmer groups illustrates the cooperative relationship between farmers in finding solutions to their farming problems to achieve the expected goals. Based on the Regulation of the Head of Human Resources Extension and Development Agency of the Ministry of Agriculture Number: 168/Per/SM.170/J/11/2011 concerning Guidelines for Assessing the Capability of Farmer Groups, indicators for assessing the performance of farmer groups are the ability to plan activities, the ability to organize activities, the ability to carry out activities, the ability to control and report activities and the ability to develop farmer group leadership. If the indicators for assessing the performance of farmer groups are carried out as they should, they should affect the income of paddy rice farming. Farmer groups with high performance have high work productivity, so there is an increase in revenue. Conversely, if a farmer group has low performance, then work productivity is low, and there is no increase in income. Assessment of the performance of farmer groups as part of the government needs to be done, both in terms of human resources (HR) and members of the service performance of farmer groups.

RESEARCH METHODS

Research Location and Time

This research was conducted in Pasiran Village, Gebang District, Langkat Regency, North Sumatra, considering that most Pasiran village communities are farmers and have farmer group institutions. The research was conducted in January 2023.

Data Types and Sources

The types of data used in this research are primary and secondary. Preliminary data is obtained directly from the research location with data collection techniques through observation, interviews, and questionnaires. Secondary data is obtained through journals, books, and the Gebang District Agricultural Extension Agency.

Data analysis

The data analysis method used in this study is as follows:

1. *Likert Scale*

According to Syarifuddin (2021), the *Likert* scale measures attitudes and opinions towards a question or statement determined explicitly by the researcher. The list of questions (questionnaire) per question item consists of 5 answers, namely excellent (score 5), good (score 4), neutral (score 3), not good (score 2), and terrible (score 1). The *Likert scale* is used to evaluate farmer group performance indicators, namely:

1. Ability to plan activities
2. Ability to organize activities
3. Ability to carry out activities
4. Ability to control and report activities
5. Ability to develop leadership

2. Revenue Analysis

Income analysis is the total revenue minus the total costs incurred during production (Saeri, 2018). The things that need to be calculated to determine income are as follows:

Calculating production costs

Total costs are fixed costs plus variable costs (Saeri, 2018). The total price is systematically formulated as follows:

$$TC = TFC + TVC$$

Information :
TC = *Total Cost* (Total Cost)
TFC = Total *Fixed Cost*
TVC = Total *Variable Cost*

Calculating receipts

Acceptance results from multiplying the price by the number of goods produced (Saeri, 2018). Systematic acceptance can be formulated as follows:

$$TR = P.Q$$

Information :
TR = *Total* Revenue
P = *Price*
Q = *Quantity* (Number of Goods)

Calculating income

Income can be formulated systematically as follows:

$$I = TR - TC$$

Information :
I = *Income* (Farming Income)
TR = *Total Revenue* (Total Revenue)
TC = *Total Cost* (Total Cost)

3. Simple Linear Regression Analysis

According to Ningsih & Dukalang (2019), simple linear regression analysis is a statistical technique to determine the effect of the independent variable (independent variable), which has only one on the dependent variable (dependent variable). Simple regression analysis can be systematically formulated as follows:

$$Y = a + bX + e$$

Information :

Y = Income (Rp)

a = Constant

b = Regression coefficient

X = Right group performance (score)

e = Standard error

RESULTS AND DISCUSSION

Farmer Group Performance Level

The level of performance of farmer groups is a description of the results of work or the level of achievement of farmer groups in realizing the goals and roles of farmer groups. The results of the performance level of farmer groups in Pasiran Village are as follows:

Table 1. Performance Level of Pairan Village Farmers Group

Description	Total Score	Average Score	Interpretation
Farmer Group Performance Level	2.995	80.94	Currently

Source: Primary Data (processed) (2023).

Based on table 1. It is known that the performance level of the Pasiran Village farmer group, with a total score of 2.995 and an average score of 80.94, means that the performance level of the farmer group is moderate. The performance level of moderate farmer groups can be indicated by several sub-indicators showing the best performance level. The sub-indicators that best offer a good level of performance can be seen in the following table:

1. The sub-indicator defines the group's needs (RDKK). The definitive plan for group needs (RDKK) contains information about the names of the members, the area of land based on the Notice of Taxes Payable (SPPT), and the amount of Fertilizer needed by farmers (Ridiansyah et al., 2019). Based on the research that has been done, the farmer groups in Pasiran Village have prepared a definitive group needs plan (RDKK) well.

2. The sub-indicators organize the division of tasks for group members and administrators. According to Manda (2016), managing is to divide functions with full responsibility. Based on the research that has been done, the Pasiran Village farmer groups organize the division of tasks for group members and administrators, as evidenced by the existence of an organizational structure for each farmer group, namely the chairman, secretary, treasurer, and members.

3. Based on the research that has been done, the Pasiran Village farmer groups carry out the group needs definitive plans (RDKK) well, as evidenced by the distribution of subsidized fertilizers to farmer group members every planting season. The subsidized fertilizers distributed to members of farmer groups are Urea and NPK Phonska. The distribution of subsidized fertilizers to members of

farmer groups minimizes farmer spending on fertilizer needs in paddy rice farming.

Revenue Analysis

The income of lowland rice farming is obtained from revenue minus the total cost of production so that the average income/planting season of lowland rice farming is obtained. The income from paddy rice farming in Pasiran Village, Gebang District, Langkat Regency is as follows:

Table 2. Average Cost of Production/Planting Season

No	Production cost	Average (IDR/planting season)
1	Fixed cost	
	a. Land lease	749.324
	b. Depreciation (Depreciation)	122.183
2	Variable Cost	
	a. Seed	108.784
	b. Fertilizer	1.624.027
	c. Pesticide	353.513
	d. Labor Wages	3.120.730
	Total	6.078.561

Source: Primary Data (processed) (2023).

Table 2 shows that the average production/farming cost is IDR 6.078.561/planting season, which includes fixed costs and variable costs incurred during the production process of paddy rice farming.

Table 3. Average Revenue/Planting Season

No	Description	Unit	Per Growing Season
1	Production	kg	1.964
2	Reception	IDR	8.341.216

Source: Primary Data (processed) (2023).

Based on Table 3. It is known that the average production of paddy rice/farming is 1.964 kg/planting season, with an average income/farming of paddy rice of IDR 8.341.216 / planting season.

Table 4. Average Income/planting season

No	Description	Average (IDR/planting season)/farm business
1	Reception	8.341.216
2	Production cost	6.078.561
	Income	2.262.655

Source: Primary Data (processed) (2023)

Based on Table. Fourth, the average income of lowland rice, namely the average income of lowland rice farming minus the average production of lowland rice farming, is known. The average income/lowland rice farming is IDR 2.262.655/planting season.

Simple Linear Regression Analysis

Simple linear regression analysis tests the effect of one independent variable or independent variable on the dependent variable or dependent variable. In this study, the independent variable is the performance of farmer groups (X), and the dependent variable is income (Y). The results of simple linear regression analysis are as follows:

Table 5. Simple Linear Regression Analysis Results

Variable	Regression Coefficient	t count	Sig.
Constanta	-6,750	-1,283	.208
Performance	.126	1936	061
R	.311		
R Square	.097		
t table	2030		

Source: Primary Data (processed) (2023).

A simple linear regression equation based on Table 4. can be interpreted as follows:

$$Y = -6.750 + 0.126X + e$$

The constant value (a) of -6,750 indicates that if the X variable (performance) does not change (stable), then the income of paddy rice farming will decrease by IDR 6,750. The value of the regression coefficient (X) of 0.126 indicates that for every increase of one unit of farmer group performance (variable X), the income of paddy rice farming (Y) will increase by IDR 0.126.

The validity of the Ho and Ha hypotheses in this study was tested using the t-test. According to Priyanto (2013), the t-test shows how far the influence of one independent variable individually explains the dependent variable. Testing is done by looking at the significance level and comparing the t count with the t table. If the significance level is <0.05 and t count > t table, Ho is rejected, and Ha is accepted. Ho is accepted, and Ha is dismissed if the significance level is > 0.05 and the count < t table. Based on Table 5. it is known that the calculated t-value of the performance variable is 1,936 with a significance value of 0.061. This proves that the t value is 1,936 < t table 2,030 and the significance value is 0.061 > 0.05, then Ho is accepted, and Ha is rejected, meaning that the performance variable of the farmer group (X) does not affect the income variable of paddy rice farming (Y). This is because some of the sub-indicators in this study show that the level of performance is not good, affecting the income earned by farming. The sub-indicators with poor performance levels are as follows:

1. Sub-indicators carry out regular meeting schedules and member meetings. The Agricultural Extension and HR Development Agency (2012) stated that routine farmer group meetings are meetings between administrators or administrators with members of farmer groups and farmer groups with extension workers whose aim is to discuss and solve farming problems together, exchange information, and so on so that it has a positive impact. To increase production and farm income. A good farmer group meeting is held regularly every two weeks. Based on the research that has been done, the Pasiran Village farmer groups do not routinely hold group meetings and member meetings, especially board meetings with members of farmer groups, where these meetings and member meetings are usually only had 1-2 times a year and are not even held because farmers are members of farmer groups. He is busier with his work, so adjusting the time to hold meetings and that agricultural extension officers

rarely conduct field visits because one agricultural extension worker oversees several villages is difficult.

2. The sub-indicators carry out the use of resources (technology). The Agricultural Human Resources Extension and Development Agency (2012) states that the use of technology to increase agricultural productivity is unquestionable; for example, productivity increases rapidly when farmer members of farmer groups use superior seeds, appropriate fertilizers, timing of planting, use of agricultural machinery, and other technologies. Based on research that has been done, farmer group members reuse seeds from crops that are considered good or buy seeds from neighbors' crops whose results are considered reasonable by farmers; there is no setting for planting time, even though the timing for planting is critical due to the type of rice fields in the village. Pasiran is a rain-fed rice field, namely a rice field whose irrigation system is highly dependent on rain and cropping patterns that are not simultaneous. In addition, this is also related to the education level of the sample farmers, who are dominated by the elementary school level. According to Mandang et al. (2020), farmers with a higher level of education are faster in adopting innovations. Thus, it is necessary to increase the human resources of farmers through the role of agricultural extension workers by guiding the importance of utilizing technology to increase farm productivity and income.

3. Sub-indicators carry out farming activities. According to Kabeakan (2017), farming is the implementation of activities carried out by farmers either as managers, cultivators, or land tenants on a plot of land that is controlled, where farmers manage production inputs (production facilities) with the knowledge and ability to obtain maximum production results. Farming production factors generally are land, capital, labor, and management. According to Butar (2015), the success of farming is primarily determined by how the management (management) is implemented in farming. How to manage human resources and owned capital to be effective and efficient. Based on the research that has been done, because it is rare for members of farmer groups to receive knowledge through counseling, managing their farming is done based on their farming experience only. In addition, the lack of capital owned by farmers causes limited use of production facilities, so farming management (management) cannot be carried out optimally, affecting farming production and income.

4. Sub-indicators evaluate the organizational/institutional performance of farmer groups. The Agricultural Human Resources Extension and Development Agency (2012) states that an evaluation is needed by the farmer groups themselves (self-evaluation), where through organizational/institutional performance evaluations, it is known whether farmer groups play the role they should. Based on research that has been conducted, meetings that are not routinely held have resulted in not evaluating organizational/institutional performance, so the Pasiran Village farmer groups do not know the deficiencies that need to be addressed by the farmer group institutions. If there is no improvement, then there will be no change.

5. Sub-indicators evaluate the implementation of group activities. The Agricultural Human Resources Extension and Development Agency (2012) states that evaluating the implementation of group activities can provide an overview of the success of a joint effort. Based on the research that has been done, the implementation of group activities such as routine meetings and non-routine member meetings is carried out,

causing an evaluation of the implementation of group activities not to be carried out so that there is no picture of the success of the joint business being carried out.

6. Sub-indicators develop farming activities. The Agency for Extension and Development of Agricultural Human Resources (2012) states that capital accumulation is needed to develop farming activities. The management of farmer groups looks for sources of capital, both formal and non-formal financial institutions that can facilitate the capital needs of farmer group members at a low cost and easily accessible so that through this capital, the members of farmer groups do not lack capital which results in limited use of production facilities. Based on the research that has been done, there is no capital accumulation obtained by members of farmer groups, so capital limitations continue to occur, which will affect farming production and income.

CONCLUSIONS AND SUGGESTIONS

The performance level of the Pasiran Village farmer groups is moderate. The average income of lowland rice is IDR 2,262,655/planting season. The performance of farmer groups did not positively and significantly affect the income of paddy rice farming in Pasiran Village.

For the government, it is hoped that it can strive for programs that can foster and motivate farmer groups to obtain skills and knowledge. For Pasiran Village WKPP agricultural extension workers, reviewing activities carried out by farmer groups regularly provides direction for the progress of farmer groups. For farmer groups to further improve their performance by discussing problems facing farming with each member of the farmer group, they need to receive knowledge via the Internet to provide creative ideas for developing rice farming.

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