

**FACTORS AFFECTING FARMER PERFORMANCE IN TRANGGULASI
FARMER GROUP IN BATUR VILLAGE, GETASAN
SUB-DISTRICT, SEMARANG REGENCY**

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ABSTRACT

The aim of the study was to 1) analyze the level of farmer's performance in the Triangulasi farmer group, and 2) analyze correlation factors relating to the farmer's performance of Triangulasi farmer group members in Batur Village, Getasan Sub-District, Semarang regency. The research was conducted from October to November 2017 in the Batur village, Getasan sub-district, Semarang Regency. The method used in this research was a survey method with 32 respondents. The data were collected using questionnaires, interviews, and observations. The data analysis was using the Rank Spearman correlation test. The research result showed that 1) most of the members of Triangulasi farmer groups had a low-performance level, 2) the land size, farmer's motivation, and farmer's perception about the farmer group's role were not significantly related to the farmer's performance in Triangulasi of farmer group members in Batur Village, Getasan sub-District, Semarang Regency. Hence, the group leader needs to help the farmer improve product quality.

Keywords: *farmers, organic vegetables, performance*

BACKGROUND

Farmers are figures who have an essential role in driving every activity in the agricultural sector, especially in an agrarian country like Indonesia. The success of farmers in reviving the farm sector is an essential factor in meeting the country's food needs and being a manifestation of the performance possessed by farmers. The version in question is the number of yields obtained from farming activities and the highest quality results that are suitable for consumption by the community.

Along with increasing public awareness of the importance of health, the need for healthy foods such as organic vegetables also increases. This is because organic vegetable products do not contain chemicals like factory-made pesticides that can harm human health. Based on this, farmers who apply organic farming systems are expected to be able to meet the food needs, especially organic vegetables for the community.

One of the farmer groups that implement an organic farming system in Central Java, especially in the Semarang Regency area, is the Tranggula farmer group. The consistency of the Tranggula farmer group in implementing an organic farming system since 2000, as well as being a supplier of organic vegetables in a well-known supermarket such as Super Indo, which is spread across the city of Semarang and Salatiga, is one of the manifestations of the performance shown by its members, besides that inequality often occurs. The amount of harvested organic vegetables that the Tranggula farmer group can absorb before being sent to the supermarkets that have collaborated. This is due to supermarket demand for certain organic vegetable products, limited quantities, and high-quality standards. Therefore, the role of farmer groups is needed to overcome this inequality and maintain the group's balance. Based on the problems above, this research was conducted with the objectives of

(1) analyzing the performance level of organic vegetable farmers of the Tranggula farmer group members, (2) knowing the efforts of the Tranggula farmer group in improving the performance of each member, (3) analyzing the factors related to performance. Organic vegetable farmers are members of the Tranggula farmer group.

RESEARCH METHODS

This research was conducted from October to November 2017 in Batur Village, Getasan District, Semarang Regency. The method of collecting data by census uses all members of the Tranggula farmer group as respondents, totaling 32 people. The way of data collection used a questionnaire, interviews with respondents to obtain primary data, and observation to obtain supporting data.

The data analysis used in this research is descriptive analysis and quantitative analysis. A descriptive study was conducted to find out the general description of the members of the Tranggula farmer group, Batur Village, Getasan District, and Semarang Regency. Quantitative analysis was conducted to determine the factors related to the performance of organic vegetable farmers who are members of the Tranggula farmer group.

The performance of farmers who are members of the Tranggula farmer group is the percentage of the farmer's harvest that the farmer group absorbs for one year. The level of performance is divided into three categories of scores, namely high (3), moderate (2), and low (1). The farmer's performance level is known based on the percentage of the highest and lowest production absorbed by the Tranggula farmer group, which is then calculated using the interval formula as follows:

$$\begin{aligned}\text{Interval} &= (\text{Highest percentage} - \text{Lowest percentage})/\text{Number of Class} \\ &= (100-0)/3 \\ &= 33,3\end{aligned}$$

The class length is obtained by dividing the interval by the number of classes so that the performance is declared low if the percentage of production absorbed by the farmer group is 0 – 33.3%, Medium 33.3 – 66.7%, High 66.7 – 100%. The motivation of farmers in groups is why farmers choose to join farmer groups. The cause of farmers in groups was measured based on agreement with three positive statements with three score categories, where firmly agree had a score of 3, agreed had a score of 2, and disagreed had a score of 1. The answers obtained were added up according to the scores of each category. The score results are then calculated using the interval formula to get a score and then grouped according to the level of motivation with the following procedure:

$$\begin{aligned}\text{Interval} &= (\text{Highest percentage} - \text{Lowest percentage})/\text{Number of Class} \\ &= (9-3)/3 \\ &= 2\end{aligned}$$

The class length is obtained by dividing the interval by the number of styles so that the motivation of farmers is declared low if they have a score of 3 - 5, moderate 5.1-7, and high of 7.1-9. Farmers' perception of the role of farmer groups is the farmer's assessment of the realization of the function of the existence of a farmer group. Farmers' perceptions of the part of farmer groups can be expressed in 3 categories of scores, excellent has a score of 3, quite good has a score of 2, and less good has a score of 1. The answers obtained are added up according to the scores of each category. The score results are then calculated using the interval formula to get a score and then grouped according to the level of activity with the following procedure:

$$\begin{aligned}\text{Interval} &= (\text{Highest percentage} - \text{Lowest percentage})/\text{Number of Class} \\ &= (9-3)/3 \\ &= 2\end{aligned}$$

The class length is obtained by dividing the interval by the number of styles so that the perception of farmers' perception of the role of farmer groups is declared unfavorable if it has a score of 3 - 5, quite good 5.1 - 7, and very good 7.1 - 9. Testing the hypothesis regarding the factors related to the performance of organic vegetable farmers who are members of the Tranggula farmer group using the Spearman Rank correlation test in the SPSS (Statistical Package for the Social Science) application with the following formula:

$$r_s = 1 - \frac{\sum d_i^2}{N^2 - N}$$

Significance was tested based on the value obtained from the analysis results. While the criteria for concluding with a confidence level of = 0.05 are:

1. If the value of sig. 0.05, then Ho is rejected, meaning that there is a significant relationship between land area, farmer motivation in groups, and farmers' perceptions of the role of groups with farmer performance.
2. If the value of sig. > 0.05, then Ho is accepted, meaning that there is no significant relationship between land area, motivation of farmers in groups, and farmers' perceptions of the role of groups with farmer performance.

RESULT AND DISCUSSION

Tranggulasi Farmers Group Profile

The Tranggulasi farmer group is an organization that was founded in 2000 with 32 members. The Tranggulasi farmer group was founded by its members based on shared interests, conditions of the social environment, economy, resources, and commodities. The Tranggulasi farmer group has the same interests, namely wanting to implement an organic and environmentally friendly cultivation system. This was done because of the impact of various problems the members face, especially the high production inputs and the low selling price of vegetables. Various collaborations have been carried out with multiple parties, including schools, campuses, the private sector, to government ranks, to have a positive impact on the marketing of organic vegetables that the members of Tanggulasi occupy. In late 2009, Tanggulasi started exporting French beans to Singapore and Malaysia. In addition, it is also able to penetrate well-known local markets, such as Super Indo.

The vegetables cultivated by members of the Tranggulasi farmer group are very diverse; it is recorded that 21 types of vegetables have been produced, namely broccoli, cabbage, head lettuce, romaine lettuce, chicory, pakcoy, spinach, mustard pagoda, coriander, leeks, tomatoes, beans, chilies, carrots, white radishes, beets, potatoes, cucumber krai, and chayote. Until now, Trianggulasi is getting busier with P4S training services (Center for Agricultural and Rural Self-Help Training) and consistency in maintaining the quality of organic vegetables. Based on the development of farmer groups, according to Anantanyu (2009), the function of farmer groups is as a teaching and learning class, as a farming production unit, and as a vehicle for cooperation.

Characteristics of Respondents

Respondents selected were all members who are members of the Tranggulasi Farmers Group with 32 people. Respondents in this study consisted of various characteristics and identities, including age, education, farming experience, a land area owned, motivation in groups, perception of the role of farmer groups, and level of performance. The characteristics of respondents in this study can be seen in Table 1.

Table 1. Number and Characteristics of Respondents

No	Characteristics	Indicator	Category	Amount (people)	Percentage (%)
1	Age (Years)	< 40	Productive	6	18.8
		40 – 60	Quite productive	21	65.6
		> 60	Less productive	5	15.6
2	Education	SD	Very low	25	78
		Junior High School	Low	2	6.3
		Senior High School	Currently	2	6.3
		Bachelor	High	3	9.4
3	Farming Experience (Years)	< 5	Less experienced	0	0
		5 – 10	Experienced enough	3	9.4
		> 10	Experienced	29	95.6
4	Land Area (Hectares)	< 0.5	Narrow	17	53.1
		0.5 – 2	Currently	15	46.9
		> 2	Large	0	0
5	Group Motivation	3 – 5	Low	0	0
		5.1 – 7	Currently	3	9.4
		7.1 – 9	High	29	90.6
6	Perceptions of the Role of Farmer Groups	3 – 5	Not good	2	6.3
		5.1 – 7	Pretty good	21	65.6
		7.1 – 9	Very good	9	28.1
7	Performance Level	0 – 33.3%	Low	20	62.5
		33.4 – 66.7%	Currently	9	28.1
		66.8 – 100%	High	3	9.4
TOTAL				32	100

Based on Table 1, it is known that most of the farmers belonging to the Tranggulasi farmer group belong to the productive age, namely six people less than 40 years old and 21 people aged 40-60 years. In contrast, five other members aged more than 60 years are included in the unproductive category. Farmers of productive age are physically stronger than farmers who are not effective. This is by Burhansyah's (2014) opinion, which states that productive age is the capital in carrying out farming activities.

Most of the members of Tranggulasi have a shallow level of education. As many as 25 members (78%) out of 32 people have elementary school education (elementary school). Hapsari (2012) states that education can make a person think logically, systematically, and wisely in making decisions. Most of the members of the Tranggulasi farmer group are experienced farmers. This is due to more than 15 years of farming experience, as many as 24 members (75%) out of 32 people. Putri (2016) stated that the experience gained by a person would help provide knowledge and skills through the work they are engaged in.

Most members of the Tranggulasi farmer group have a land area that is classified as narrow or less than 0.5 hectares, with as many as 17 members (53.1%) out of 32 people. Hendrik (2011) states that one of the indicators to determine farmers' welfare is to see how much income is obtained from the results of farming production carried out and how much arable land is used for farming.

Most of the respondents had high motivation to work in groups; as many as 29 farmers belonging to the Tranggulasi farmer group had a high level of motivation, while the other three farmers had a moderate level of motivation. The highest reason that drives farmers to join farmer groups is to obtain maximum results. The maximum yield in question is the harvest or income earned. Farmers assume that by joining a farmer group, the farmer gains additional skills through counseling held by government agencies through groups, market information, and supporting production facilities to increase farm productivity. High productivity or yields are expected to affect farmers' income levels. This is by Suratiyah's (2011) opinion, which states that farmers as implementers expect high production to get high income. Therefore, farmers utilize all resources (workforce, capital, facilities, and infrastructure) for production activities to get the production expected by farmers.

Most of the respondents stated that the farmer groups were quite good at carrying out their roles, as many as 21 people, while nine stated very well, and two people said they were not good. Farmers assume that farmer groups play an excellent role in cooperation for group members. Some of the collaborations between group members are providing market information for members who want to sell crops that are not absorbed by farmer groups, helping to cultivate the land, and community service for the hamlet. This is the opinion of Nuryanti and Swastika (2011), which state that farmer groups are the correct form of cooperation for activities involving using agricultural tools, strengthening working capital, and collaboration in processing to marketing agricultural products.

Most of the respondents have low performance, as many as 20 people. This is because the percentage of harvest yields absorbed (received) by farmer groups is low, ranging from 0 to 33.3%. Respondents with moderate performance levels were nine people with absorbed harvests of 33.4 - 66.7%, and respondents with high-performance levels were three with absorbed crops of 66.8 - 100%.

Table 2. Total and Percentage of Production Absorption of Members by Tranggulasi Farmers Group

Number of respondents (people)	Total production (kg)	Total production absorbed (kg)	Percentage of production absorbed (%)	Total unabsorbed production (kg)	Percentage of unabsorbed production (%)
32	563,088	186,054	32	377,033	68

Table 2 shows that farmers' harvests absorbed by Tranggulasi were 186.054 kg (186.1 tons) with a percentage of 33% from 563.088 kg (563.1 tons). The average yield of 32 members of the Tranggulasi farmer group was 32%. These results indicate that the works absorbed by farmer groups are low because the products owned by farmers do not match the supermarket's demand criteria. Supermarket demand for certain types of vegetables is a factor that Tranggulasi considers in absorbing harvests from group members; organic vegetables that are absorbed must go through a sorting and grading process before being sent to the supermarket. Sorting is done to separate the harvest based on the quality of the vegetables produced. Each commodity is sorted manually to separate physically good commodities from bad ones (rotten/wounded). At the same time, grading is based on health, cleanliness, shape, size, weight, and color to get good product quality. And fit for

sale. Aliyatillah's (2013) opinion states that grading is carried out by grouping products based on size and quality to obtain products with the best quality and high selling value. The harvest that Tranggulasi does not absorb will be sold to traditional markets.

Analysis of Factors Related to Farmer Performance

The performance of organic vegetable farmers who are members of the Tranggulasi farmer group is measured based on the percentage of yields absorbed by the Tranggulasi farmer group. The results of the analysis of factors related to the performance of organic vegetable farmers in the Tranggulasi farmer group, Batur Village, Getasan District, and Semarang Regency are presented in Table 3.

Table 3. The results of the analysis of factors related to the performance of organic vegetable farmers in the Tranggulasi farmer group, Batur Village, Getasan District, and Semarang Regency.

Factor	Performance	
	rs	Sig
Land area	0.024	0.898
Group motivation	-0.184	0.312
Perception of group roles	-0.004	0.984

Based on Table 3, it is known that the correlation analysis of the land area and the performance of organic vegetable farmers who are members of the Tranggulasi farmer group produces a correlation coefficient value of 0.024 with a significance of 0.898, which means that the relationship between the two variables is not unidirectional and not significant. Based on these results, it can be interpreted that the area of land owned by farmers is not related to the number of farmers' crops that Tranggulasi can absorb. This is because land area is generally associated with the amount of product obtained but does not guarantee the quality of the harvest from the land suitable for absorption by farmer groups. The quality of crop yields is generally influenced by several factors, namely plant maintenance which includes prevention of pests and diseases, and good post-harvest handling to prevent damage to crop yields. Wijayanti (2009) states that plant maintenance is an effort to maintain the quality of the products produced at harvest. Activities in plant maintenance consist of providing balanced fertilizer or nutrients/fertilizing, watering, weeding/perfumes and replanting, and controlling plant pests and diseases.

Analysis of the relationship between farmers' motivation in groups and performance resulted in a correlation coefficient of -0.184 with a significance of 0.312, which means that the relationship between the two variables is not unidirectional and not significant. Based on these results, it can be interpreted that the motivation of farmers in groups is not related to the number of farmers' crops that Tranggulasi can absorb. This is because farmers think that by joining a farmer group, the farmer gets additional skills through counseling and production facilities that support increasing the productivity of his farm. At the same time, some obstacles are faced and even cannot be avoided by farmers in carrying out their farming activities even though they have joined farmer groups.

The constraints are weather conditions such as the intensity of the rain or prolonged dry spells and pest and disease attacks. Some of the impacts given by these factors are damage and death to plants which cause a reduction in the amount of production and the quality of the yields obtained, thus affecting the amount of harvest that farmer groups can absorb. Susanti (2014) stated that high rainfall intensity causes plants to rot quickly and fall off. This statement is supported by Kamal

(2014), which says that the quality of vegetables is strongly influenced by pest and disease attacks which are pretty high in the rainy season. Some of the impacts given by these factors are damage and death to plants which cause a reduction in the amount of production and the quality of the yields obtained, thus affecting the amount of harvest that farmer groups can absorb.

Analysis of the relationship between farmers' perceptions of the role of farmer groups and performance resulted in a correlation coefficient of -0.004 with a significance of 0.984, which means that the relationship between the two variables is not unidirectional and not significant. Based on these results, it can be interpreted that farmers' perceptions of the group's role are not related to farmers' harvests that Tranggulasi can absorb. Farmers' perceptions of the part of farmer groups are not associated with the percentage of crops absorbed by farmer groups. Farmers think that farmer groups play an excellent role in cooperation for group members, such as providing market information for members who want to sell their crops and help cultivate the land. However, market demand, especially the modern market, which cooperates with farmer groups for a certain amount of vegetables with the best quality, is a consideration to determine the amount of harvest appropriate for farmers' groups to absorb. The absorption of crop yields is determined based on supermarket demand for a certain amount of vegetables with the best quality, namely through a grading processor selection of products with the best quality to be marketable. This follows Aliyatillah's (2013) opinion, which states that grading is carried out by grouping products based on size and quality to obtain products with the best quality and high selling value.

CONCLUSION AND SUGGESTION

The study results showed that most of the farmers who were members of the Tranggulasi had a relatively low level of performance; this was because some of the harvests belonging to the farmers were absorbed by the Tranggulasi Group ranging from 0 – 33.3%. The area of land owned by farmers, the motivation of farmers in groups, and farmers' perceptions of the role of farmer groups do not have a significant relationship with the performance of farmers who are members of Tranggulasi.

Based on the results of the study, it is suggested to the chairman or administrator of the Tranggulasi farmer group that they can help their member farmers to improve the quality of organic vegetable products so that they have a high selling value and increase cooperation with supermarkets or other modern markets so that the harvests owned by group members can be well absorbed and make it easier for Tranggulasi members to get clear market access.

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