

The Influence of the Guidance from Agricultural Extension Agents on the Dynamics of Farmer Groups

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Abstract—The role of extension agent in agriculture is very important to improve the abilities, knowledge and skills of farmer group members. This research aims to find out: (1) the influence of the guidance from agricultural extension agents in assisting the preparation of RDKK and RDK on the dynamics of farmer groups, (2) the influence of the guidance from agricultural extension agents in Practice Work System and Visit (PWSV) on the dynamics of farmer groups, and (3) the influence of the guidance from agricultural extension agents in assisting the preparation of DPGA DGP and PWSV on the dynamics of farmer groups at Gapoktan Mekar Jaya, Sirnabaya Village, Gunung Jati Subdistrict. This research is descriptive quantitative methods with 60 respondents as the subject of the research. The results showed that: (1) There was a significant influence of the guidance from agricultural extension agents in assisting the preparation of RDK, RDKK on the dynamics of farmer groups in Mekar Jaya Gapoktan, (2) There was a significant partial influence of the guidance from agricultural extension agents in the practice work system and visit on the dynamics of farmer groups in Mekar Jaya Gapoktan, (3) There is a simultaneous influence of the guidance from agricultural extension agents in assisting the preparation of RDK, RDKK, and the practice work system and visit on the dynamics of farmer groups in Mekar Jaya Gapoktan.

Keywords: *RDK and RDKK, PWSV, dynamics, farmer group*

I. INTRODUCTION

Indonesia is one of the developing countries in the world that faces many problems such as economic, social, legal, political and other fields. The problems that the government cannot resolve are poverty and unemployment caused by shifting the development of the agricultural sector to the industrial sector [1]. We can see that the contribution of the industrial sector in gross domestic product stand in the first position with the largest contribution, then the second position is the trade sector and the third position is the agricultural sector [2].

Institutional development in agricultural development increase the competitiveness of farmers [3]. According to Achmad Faqih, it requires agricultural organizations that have an ability to carry out the vision and mission of agricultural development, expect the challenges of agricultural development, and take advantages from opportunities consistently to realize an agricultural system with highly

competitive agribusiness and agro-industry [4]. Therefore, it needs qualified human resources with the characteristics of independence, professionalism, entrepreneurship, dedication, high work ethic, discipline, and global character [5]. So farmers and other agricultural businesses will build efficient and competitive farming businesses [6]. One effort to improve agricultural human resources is through agricultural extension activities [7].

The role of extension agent in agriculture is very important to improve the abilities, knowledge and skills of farmer group members so they can achieve their goals. The jobs of the extension agent in agriculture are to create strong and independent farmer groups and improve the ability of group members in agribusiness development and functions. To achieve that goals, the extension agents conduct meetings with groups regularly, facilitate joint business activities, help the farmers to cooperate with other parties, and help them develop work plans and steps to do. After these activities have been done, the extension agents do the evaluation.

According to Mardikanto [8] in Achmad Faqih [9], the indicators used to measure the implementation of farmer group empowerment are: 1) the number of group members who are interested in the activities, 2) the attendance of group members in activities, 3) the consideration or approval from the members on the new ideas, 4) number and types of ideas from the members to run and control the program smoothly, 5) the amount of funds gained from group members to support the implementation of program activities, and 7) increasing group member participation.

Most of the communities in Sirnabaya village farmers and they have many farmer groups, but not all farmer groups in Sirnabaya village want to follow the Counselling Development Program. Because most of the members of farmer group are elderly, they have low interest, motivation, and awareness to get in touch with innovations in agriculture from extension agents.

Based on result of preliminary research, there are several problems faced by extension agents in guiding such as the farmer groups have a different perspective, they don't know their function, Education levels, weak human resources, fewer activities, the age of each member in farmer groups

This research aims to find out: (1) the influence of the guidance from agricultural extension agents in assisting the preparation of a Definitive Plan for Group Activities (RDKK) and Definitive Group Plan (RDK) on the dynamics of farmer groups, (2) the influence of the guidance from agricultural extension agents in Practice Work System and Visit (PWSV) on the dynamics of farmer groups, and (3) the influence of the guidance from agricultural extension agents in assisting the preparation of RDKK RDK and PWSV on the dynamics of farmer groups at Gapoktan Mekar Jaya, Sirnabaya Village, Gunung Jati Subdistrict.

II. METHOD

The writers conducted this study in Sirnabaya Village, Gunung Jati, Cirebon Regency in May-November 2018. The subject of the research was the Association of Farmers Group (Gapoktan) Mekar Jaya with 60 respondents.

The research design uses descriptive quantitative methods using a questionnaire as a tool to find out information from respondents [10]. Descriptive research method is a method in examining the status of a group of people, an object, a condition, a system of thought or a class of events in the present. The purpose of this descriptive study is to make a systematic, factual and accurate descriptive, picture or illustration of the facts, properties, and relationships of the phenomenon under investigation. The data used are primary and secondary data. The analytical method used is multiple linear analysis, t test analysis, F test analysis and determinant coefficient [11].

III. RESULTS AND DISCUSSION

A. The Discussion of Variable

1) *The overview of variable X1 guidance of agricultural extension agents in assisting the preparation of RDK and RDKK:* Based on the results of surveys and interviews on preparing RDK and RDKK, it shows that the score is 27.00 but the expected score is 32. Thus, the reality of farmers in the preparation of RDK and RDKK is 84.38% and is included in the high category. This shows that preparing the RDK and RDKK in Gapoktan Mekar Jaya, can be applied in a high category by Gapoktan members.

Based on the tabulation of the data, the description of variables is as follows:

The value of variable X1 (RDK and RDKK) of 84.38% locates in the high criterion area at an interval of 68% - 100%, thus the variable X1 (RDK and RDKK) can be described as follows:

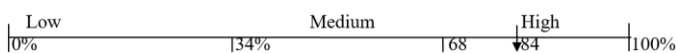


Fig. 1. The position of RDK and RDKK in criterium.

From the results of data, it showed that preparing RDK and RDKK has reached 84.38% and is included in the category of high criteria, with an interval of 68% - 100%. From these percentages, it shows that RDK and RDKK are high criteria.

This means that preparing the RDK and RDKK Mekar Jaya Village Sirnabaya can be implemented well by Gapoktan members.

2) *The overview of variable X2 (practice work system and visit):* Based on the results of surveys and interviews, practice work system and visit showed that it got the score 14.07 but the expected score is 4. So that the reality of farmers in preparing RDK and RDKK is 87.92% and is included in the category high. This showed that the practice work system and visit for Farmers Groups in Gapoktan Mekar Jaya can be implemented well.

The X₂ variable value of 87.92% located in the high criterion area at 68% -100% interval, thus the X₂ variable can be described as follows:

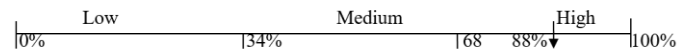


Fig. 2. The position of variable X2 (practice work system and visit) in criterium.

From the results of data, it showed that practice work system and visit has reached 75% and is included in the high criteria category, with an interval of 68% - 100%. The percentage showed that the practice work system and visit has reached a high criterion.

This means that the practice work system and visit of Farmers in Gapoktan Mekar Jaya, can be implemented well by Gapoktan members.

3) *The overview of variable (Y) dynamics group:* Based on table 20, the results of surveys and interviews Dynamics Group showed that it got the score 137.46, the expectation score is 184. Thus, the reality in the dynamics of the farmer group is 74.71% and is categorized to the medium category.

Farmer groups as a forum for organization and cooperation between members have a very important role in the farming's life community, because all activities and problems in farming are carried out by the group simultaneously. Besides that, they can move methodically, efficiently, and in an organized manner. A peasant group movement that is organized and does not follow cooperation to advanced patterns will not solve the problems faced by farmers [6].

The value of variable Y (Dynamics Group) of 74.71% is located in the high criterion area at an interval of 68% -100%, thus the variable Y (Dynamics Group) can be described as follows:

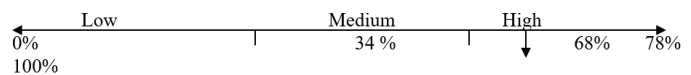


Fig. 3. The position of the dynamics of Gapoktan in criterium.

From the results of data, it can be seen that the gapoktan dynamics has reached 74.71% and is included in the high criterion category, with an interval of 68% - 100%. From this percentage showed that the dynamics of farmer groups have reached high criteria.

B. The Analysis of Research Results

1) *Results of multiple linear regression analysis:* Multiple linear regression analysis is used to determine the extent to which the independent variable knows the dependent variable. In multiple linear regression, there is one dependent variable and more than one independent variable. In this research, the dependent variable is the Dynamics of Farmer Groups, while the independent variable is the preparation of the RDK RDK and the Work Training and Visit System.

To see the similarities in the regressions between preparing the RDKK RDK and the Practice Work System and Visit to the Dynamics of Farmer Groups, see the results of the calculation of SPSS 20.0 for Windows in Coefficients a below:

TABLE I. CALCULATION OF SPSS 20.0 FOR WINDOWS IN COEFFICIENTS^A

Coefficients ^a						
Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	
	B	Std. Error	Beta			
1	(Constant)	34,698	3,727		9,310	,000
	X1	,310	,120	,365	2,575	,013
	X2	,186	,168	,157	2,108	,003

a. Dependent Variable: Y

Regression equation: $Y = 34,698 + 0.310X1 + 0,186X2$

- A constant of 34,698 states that if the RDKK RDKK variable score and the Practice Work System and Visit score are zero, then the value of the farmer group is 34.698.
- The regression coefficient of the RDKK RDKK (X1) variable is 0.310 and the Practice Work System and Visit variable (X2) is 0.186, so the dynamics variable of the farmer group (Y) will increase well.
- The variation of RDK RDKK Arrangement (X1) has a score of sig = 0.013. It means $0.013 > 0.05$. Therefore, the Dynamics of Farmer Groups variable (Y) is influenced by the RDKK RDKK preparation variable (X1). The unstandardized coefficients in preparing RDK RDK with a value of B = 0.310 and the regression coefficient is positive. It means that if the RDKK RDKK value increases 1 unit, then the dynamics of the farmer group (Y) will decrease by 0.013 with the assumption that the variable X1 is constant.
- The Practice Work System and Visit Variable (LAKU) (X2) has the score of sig = 0.003. It means $0.003 < 0.05$. The unstandardized coefficients in the practice work system and visit with the score B = 0.186 and the regression coefficient is positive. It means that if the value of the practice work system and visit has increased by 1 unit, the variable (Y) will increase by 0.186 with the assumption that the variable X2 is constant.

Based on the results of research, preparing RDK and RDKK has a significant value to the dynamics of farmer groups.

2) *The results of F test:* The F test is also called the simultaneous test, this test is carried out to find out whether or not the independent variable together or simultaneously depends on the dependent variable.

To test whether the RDK and RDKK Preparation variables, The Practice Work System and Visit, have a positive effect together on the Dynamics of Farmer Group, the F test is used.

To determine the significance of the variables X1 and X2 together with Y, the F test is done by looking at the F count in the ANOVA table. This means that there is a significant influence between X1 and X2 on Y.

TABLE II. THE RESULTS OF F TEST.

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	218,408	2	109,204	7,093	,002 ^b
	Residual	800,574	86	15,396		
	Total	1018,982	88			

a. Dependent Variable: Y

b. Predictors: (Constant), X2, X1

Based on the results of the ANOVA table, the Fcount is 7,093 and Ftable is 2.71. It means that there is a positive influence between the RDK and the RDKK and The Practice Work System and Visit on the Dynamics of Farmer Group.

With preparing RDK and RDKK well, the dynamics of farmer groups and the Practice Work System and Visit can be formed properly. For this reason, preparing the RDK and RDKK and The Practice Work System and Visit must run as well as possible because these two factors can influence the dynamics of the farmer groups.

The supervisor/facilitator must be ready to deal with unexpected reactions from participants because even though easy goals have been reached but because of the different experience of participants or other obstacles, it could be deviations. The supervisor must be creative and clever in using events by exploring the background knowledge and experience [12]. From the description above, the application of group dynamics in the activities of the training process, it should pay attention to what, who and how to carry out and what the objectives to be achieved in the activity. To implement the training process to run smoothly, planning must be made before the implementation.

3) *The result of t test:* T test or also called partial test, this test is carried out to test the significance of the influence of independent variables on the dependent variable individually (partial). Based on the processing of SPSS 20.0 t-test, the results can be seen in the table below:

TABLE III. THE RESULTS OF T TEST

		Coefficients ^a			T	Sig.
		Unstandardized Coefficients	Standardized Coefficients			
Model		B	Std. Error	Beta		
1	(Constant)	34,698	3,727		9,310	,000
	X1	,310	,120	,365	2,575	,013
	X2	,186	,168	,157	2,108	,003

a. Dependent Variable: Y

- Based on the results of t test for the RDKK RDK variable variables, it got that $t_{count} > t_{table}$ is $2.575 > 1,662$ with a significant value of $0.013 > 0.05$. Therefore, H_0 is rejected and H_1 is accepted. This means RDK and RDKK have a positive influence on Dynamics Group.

Based on the results above, it can be concluded that preparing the RDK and RDKK can increase the existence of an approach in the farmer groups so that the dynamics of the farmer groups can be intertwined as well as possible.

- Based on the results of t test for The Practice Work System and Visit variables, it obtained that $t_{count} > t_{table}$ or $2.108 > 1,662$ with a significant value of $0.003 < 0.05$. Therefore, H_0 is rejected and H_1 is accepted. This means that there is a positive influence between The Practice Work System and Visit on Dynamics Group.

Based on the result above, it can be concluded that The Practice Work System and Visit done routinely and periodically can increase approach in the farmer groups so that the dynamics of the farmer groups can be intertwined as well as possible.

4) *The coefficient of determination:* The coefficient of determination (R²) is used to measure how far the model's ability to explain the dependent variable. The value of the coefficient of determination is between 0 and 1. If the value of the coefficient of determination is getting closer to one it means that the independent variable provides almost all the information needed to predict the dependent variable, the following is the result of the coefficient of partial determination that can be seen in the model summary based on the results of SPSS 20.0 below.

To find out the influence of RDK and RDKK, The Practice Work System and Visit on Dynamics Group, the results, it can be seen from the following table.

TABLE IV. TABLE OF THE COEFFICIENT OF DETERMINATION

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,463 ^a	,214	,184	3,92373

a. Predictors: (Constant), X2, X1

- The R value of 0.463 shows that the correlation between Group Dynamics and the 2 independent variables is strong.
- The amount of the Adjusted R square (R²) or the coefficient of determination (KD) is 0.184. This figure shows the influence of the RDK and RDKK, and the

Practice Work System and Visit on Dynamics Group is 18.4%. The remaining 81.6% is influenced by other factors.

Farmers as the main actors in agricultural development need to have the responsibility to realize the production goals and productivity targets for achieving self-sufficiency and sustainable self-sufficiency [13]. The instrument used in preparing the target planning is carried out through preparing RDK and RDKK [14].

IV. CONCLUSIONS

Based on the results and discussion, the following conclusions are as follows:

- The guidance from agricultural extension agents in assisting the preparation of RDK, RDKK has a significant influence on the dynamics of the Farmers Group in Mekar Jaya Gapoktan. It means that with the guidance of agricultural extension agents in assisting the preparation of RDK and RDKK can increase the approach of farmer groups so that dynamics of farmer groups can be intertwined.
- The guidance from agricultural extension agents in the practice work system and visit has a significant influence on the dynamics of the Farmers Group in Mekar Jaya Gapoktan. This means that with the practice work system and visit carried out by agricultural extension agents regularly and periodically, it can increase the approach between each member of the farmer group so that the dynamics of the farmer group can be intertwined and more dynamic.
- The guidance from agricultural extension agents in assisting the Preparation of RDK, RDKK in the practice work system and visit has significantly influenced to the dynamics of the farmer group in Mekar Jaya Gapoktan.

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