



# Influence of the Role of Agriculture Extension Worker (AEW) Against Farming Group Dynamics in the Dry Land Agricultural Area, West Lombok Regency

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## ABSTRACT

The dynamism of farmer groups is influenced by internal factors, namely the farmer group itself, and external factors, namely the role of the Agriculture Extension Worker (AEW). This research was carried out in West Lombok Regency with the criteria of selecting 2 sub-districts in West Lombok Regency which had a larger dry land area compared to other sub-districts, namely Sekotong District and Lembar District; from each sub-district 3, villages were selected with the criteria of having the largest number of farmers, determining selected farmer groups based on criteria. Farmer groups have been registered in the Decree of the Head of the West Lombok Regency Agricultural Service and have been recorded in the agricultural extension system (simluhtan). This research aimed to analyze the role of AEW, the dynamics of farmer groups, and the influence of the role of Agriculture Extension Worker (AEW) on the dynamics of farmer groups in dryland farming areas in West Lombok Regency. The analytical method used was descriptive analysis with a Likert scale by giving a score of 1-5 for each criterion for each indicator. The research results showed that the respondents' assessment of the role of field agricultural instructors as facilitators, educators, motivators, and organizers was in a good category. Farming group dynamics seen from the aspects of group goals, group structure, task functions, group coaching and development, group cohesiveness, group atmosphere, and group effectiveness was in the quite good category, and the relationship/correlation between the role of AEW and the dynamics of farmer groups was very strong.

## 1. INTRODUCTION

### 1.1. Research Background

An Agriculture Extension Worker (AEW) was an actor who carried out his duties to counsel farmers. Extension workers can be defined as agents of change in development in the agricultural sector. Agricultural extension workers can be said to be the spearhead of agricultural development [1]. Agriculture Extension Workers (AEW) are expected to be able to carry out their roles, such as providing information about agricultural cultivation, providing correct education and advocacy to farmers in a fair manner, facilitating farmers regarding their needs in the form of

inputs and agricultural machinery to the agency that handles this matter.

Farmers, as the targets and main actors of agricultural development, are expected to be able to develop highly competitive farming businesses. The challenge of agricultural development in the era of globalization is that Indonesian agriculture is dominated by small businesses carried out by millions of farmers on small land areas with little capital and low productivity [2]. Agricultural extension must be carried out through a group approach. This approach will encourage farmers to form strong farmer institutions to build synergy in the learning and collaboration process and as a production unit, which is part of their farming business [3].



Quality farmer resources can be achieved if farmer groups are dynamic, active, and efficient in achieving their goals. The realization of dynamic farmer groups is influenced by internal factors, namely the farmer group itself, and external factors, namely the role of field agricultural instructors in supporting the improvement of farming businesses. Farming groups in Sekotong District and Lembar District are accompanied by Agriculture Extension Workers (AEW) [4]. AEW plays a role in providing non-formal education for farmers so they can make their own decisions to increase farmer productivity and welfare.

Agricultural instructors are facilitators, innovators, motivators, dynamists, educators, and consultants [5]. Extension workers' role is not limited to conveying information and influencing farmers in decision-making. But extension workers must also be able to act as a liaison institution between farmers and the government. The role of the instructor is the level of role carried out by the instructor in his function as an agent of change, especially in encouraging group dynamics. The observations in the field show that most farmer groups have experienced the role of extension workers, and some stated that they still do not understand what is conveyed by the extension workers. So, this certainly influences the dynamism of farmer groups. If the role of agricultural instructors is carried out well and in accordance with standards, it can determine the dynamism of farmer groups in Sekotong District and Lembar District.

The dynamics of farmer groups are realized by elements that can cause the group to become alive and actively achieve its goals [6]. The elements of group dynamics in this research consist of group goals, structure, task functions, group coaching and development, group cohesiveness, group atmosphere, and group effectiveness. Regarding the role of the Agriculture Extension Worker (AEW) in creating dynamic farmer groups, this is the AEW's task. However, what also needs to be paid attention to is how the role of field agricultural instructors influences the dynamics of farmer groups in Sekotong and Lembar Districts. This is important so that in carrying out its role AEW is able to create a dynamic farmer group.

### 1.2. Literature Review

Based on Law no. 16 of 2006, agricultural instructors are individual Indonesian citizens who carry out extension activities. Agricultural extension workers generally have a strategic role as a bridge between the government, farmers, and external stakeholders. Agriculture extension is carried out jointly by the government through agricultural instructors, the harmony and equality of objectives between farmers and the government must be clear so that all the problems farmers face so far can be resolved [7]. Agriculture Extension Worker (AEW) is an extension agent whose home base is at the sub-district level Agricultural Extension Center (BPP), in carrying out his duties in direct contact with farmers, he must be known to the farmers.

## 3. RESULT AND DISCUSSION

### 3.1. Respondent Characteristics

Respondent characteristics were a general description of the condition of respondents in Sekotong District and Lembar District. Respondent characteristics are gender, age, education

Therefore, he must often meet face-to-face with rural farmers to convey all farming-related messages [8].

Group dynamics are the movements or forces within a group that determine or influence the group's and its members' behavior in achieving goals [9]. In achieving the goals of farmer groups, the most influential internal factor is the involvement of members in group activities. Therefore, dynamics formed within farmer groups are needed because only dynamic farmer groups can perform their functions well [10].

### 1.3. Research Objective

This research aimed to analyze the role of AEW, dynamics of farmer groups and the influence of Agriculture Extension Worker (AEW) on the dynamics of farmer groups in dry land farming areas in West Lombok Regency.

## 2. MATERIALS AND METHODS

### 2.1. Material and Tools

The method used in this research was descriptive. This method aimed to create a systematic, factual, and accurate description or picture of the facts, characteristics, and relationships between the studied phenomena. This research was conducted in Sekotong District and Lembar District, West Lombok Regency, from November 2023 to January 2024. The sampling method was purposive and proportional random sampling; there were 65 respondents. There are two variables in this research: the independent variable was the role of the instructor (X), and the dependent variable was the dynamics of the farmer group (Y).

### 2.2. Analysis Data

The analysis used to answer the research objectives was descriptive, using a Likert scale (1 – 5). Instrument testing was carried out through the Validity, Reliability, and Spearman Rank tests. The purpose of this test was to test whether the indicators used for each variable have a calculated  $r$  value greater than or equal to 0.05 so that it can be said to be valid. The validity test shows that the indicators used for each variable were valid. The reliability test was determined by looking at the Cronbach Alpha ( $\alpha$ ) value of the processed data, which was greater than 0.60, so the variable was declared reliable. The Cronbach Alpha ( $\alpha$ ) value for each variable showed 0.936 for the AEW Role variable and 0.953 for the Group Dynamics variable so it can be said that these two variables were reliable. To determine the relationship between the variable BPP function (X1) and the role of AEW (X) on farmer group performance (Y), a Spearman rank correlation test was carried out. The Spearman Rank test was used to analyze the level of strength, direction of relationship and significance between two variables.

level, number of family dependents, area of land cultivated, and length of farming, which are presented in Table 1.

Farming activities were generally carried out more by men as heads of the family, while women were only limited to helping or as housewives. Farming activities in the Sekotong District and the Lembar District were dominated by men as much as 86.20%; this is in line with the area's culture, where men have full and great

responsibility in meeting daily needs as heads of families. The productive age was 16-60 years because farmers have maximum physical strength at this age [11]. Farmer's age Broadly speaking, the respondents in this study were of productive age, characterized by the ability to carry out daily activities effectively and efficiently [12].

**Table 1.** Characteristics of respondents based on gender, age, education level, number of family dependents, area of land cultivated, and length of farming

Characteristics	Amount	(%)
<i>Gender</i>		
Male	56	86.20
Female	9	13.80
<i>Age</i>		
22 – 41	26	40.00
42 – 61	35	53.80
>61	4	6.20
<i>Education</i>		
No school	12	18.50
elementary school	22	33.80
Junior high school	8	12.30
Senior High School	20	30.80
College (Bachelor)	3	4.60
<i>Family Dependents</i>		
1 - 2	12	18.50
3 - 4	42	64.60
> 4	11	16.90
<i>Land area</i>		
0.2 – 1.1	51	78.50
1.2 – 2.1	13	20.00
>2.1	1	1.50
<i>Long time farming</i>		
3 - 18	29	44.60
19 - 34	27	41.50
>34	9	13.80

Source: processed primary data, 2023

The educational level of respondents in the research was still quite low, dominated by respondents with elementary school education at 33.80%. Still, the respondents can write and read, making it easier to convey and aAEW the technology presented by the instructors. The number of family dependents can motivate farmers to carry out creativity and new methods to increase production, income, and welfare. This study's family dependents were 3-4 people, 64.60%. The majority of respondents have land areas in the range of 0.2 ha to 1.1 ha, namely 51 respondents (78.5%), meaning that the land owned by respondents is in the small-scale farmer category.

### 3.2. The Role of Agriculture Extension Worker (AEW)

Based on the data obtained from this research, respondents' assessment of the role of Agriculture Extension Worker (AEW) was in a good category. The distribution of respondents' assessments of the role of field agricultural instructors is presented in Table 2.

Farmer's assessment of the role of AEW was good, meaning that extension workers have carried out their roles well. Respondents in providing an assessment of the role of AEW, of course, based on several indicators in this research, namely the role of AEW as a facilitator, educator, motivator, and organizer. The scoring mode obtained for each indicator in the field agricultural instructor role variable was presented in Table 3.

**Table 2.** Distribution of Respondents' Assessments of the Role of Agriculture Extension Worker

No	Score Mode	Amount (People)	(%)	Category
1.	1	0	0	Not good
2.	2	2	3.1	Poor
3.	3	28	43.1	Enough
4.	4	30	46.2	Good
5.	5	5	7.7	Very good
Amount		65	100.0	

Source: processed primary data, 2023

**Table 3.** Obtaining the Mode score for each indicator in the Role of Field Agricultural Instructor variable

No	Role indicator of AEW	Mode score	Spread $\sum$	%	Category
1.	Facilitator	3	34	52.3	Good
2.	Educator	3	33	50.8	enough
3.	Motivator	4	38	58.5	Good
4.	Organizer	4	28	43.1	enough
					Good
					Good

Source: processed primary data, 2023

Based on Table 3, the respondents' assessment of the 4 indicators of the AEW's role showed that the 2 indicators of the AEW's role, namely motivator and organizer, were in a good category, while the AEW's role as a facilitator and educator was in the quite good category. The distribution of respondents' assessments of each indicator was as follows:

The role of the AEW as a facilitator is based on the respondents' assessment in the quite good category; the number of respondents was 34 people (52.3%). In comparison, the others assessed the good category as many as 27 people (41.5%), 2 people in the not good category (3.1%), the poor category was 1 person (1.5%), and the very good category was 1 person (1.5%). This means that the AEW has carried out its role as a facilitator, but it was felt that this was not optimal. Respondents said obtaining seeds, fertilizers, pesticides, and agricultural machinery was often facilitated by the AEW, for example, in preparing the RDK/RDKK, including subsidized fertilizer. Farmers consider submitting allocations for subsidized fertilizer via an electronic system to be complicated, so AEW facilitates farmers. Likewise, with the need for agricultural machinery such as tractors and water pumps, AEW facilitates farmers by preparing proposals to be submitted to the Facilities and Infrastructure sector at the West Lombok Regency Agricultural Service.

The role of AEW as an Educator, based on the respondents' assessment in the quite good category, the number of respondents was 33 people (50.8%). In comparison, the others assessed the good category as many as 28 people (43.1%), in the poor category there were 4 people (6.12%), and no respondents gave ratings in the not good and very good categories. AEW has carried out its role as an educator, but it was felt that it was not optimal. The amount of material AEW presents ranges from 3 - 4 in one planting season. Apart from that, AEW also trains respondents' skills by applying the material presented in cultivating the commodities they cultivate.

The role of AEW as a Motivator, based on the respondents' assessment in the good category, the number of respondents was 38 people (58.5%). In contrast, the others assessed the quite good category, as many as 16 people (24.6%), the very good category was 9 people (13.8%), and the poor category was 2 people (3.1%). No respondents gave an unfavorable assessment of the role of AEW as a motivator. Respondents' assessment can mean that AEW has motivated respondents to manage their farming business. AEW visited respondents to direct commodities according to the planting season and cultivation management according to the commodities chosen by respondents.

The role of the AEW as Organizer, based on the assessment of respondents in the good category, the number of respondents was 28 people (43.1%). In contrast, the others assessed the quite good category, as many as 27 people (41.5%), the very good category was 7 people (10.8%), and the poor category was 3 people (4.6%). No respondents gave an unfavourable assessment of the role of AEW as an organizer. AEW helps farmers direct

good and appropriate farming, from agricultural production facilities to harvesting. AEW also helps farmers in planning which commodities are appropriate for the season to avoid the risk of crop failure.

### 3.3. Farmer group dynamics

Farming group dynamics is a term that describes the level of activity, involvement, and cooperation between members of a farming group in the agricultural business. In this research, the respondents' assessments of farmer group dynamics were based on 7 aspects of farmer group dynamics: goals, group structure, group task functions, group effectiveness, group coaching and development, group cohesiveness, and group atmosphere. Respondents' assessments of the farmer group dynamics indicator criteria were presented in Table 4.

**Table 4.** Obtaining the score mode for the farmer group dynamics indicator criteria

No	Indicator criteria	Mode score	Spread		Category
			$\Sigma$	%	
1.	Clear farmer group objectives	3	28	43.1	Good enough
2.	There was a division of tasks in groups	3	27	41.5	Good enough
3.	The function of dividing tasks in groups	3	27	41.5	Good enough
4.	Development of farming (productivity)	3	23	35.4	Good enough
5.	Member participation in farmer group activities	3	27	41.5	Good enough
6.	Leadership in groups	4	31	47.7	Good
7.	Democratic in groups	3	28	43.1	Good enough

Based on Table 4, the respondent's assessment of the indicator criteria for 7 aspects of farmer group dynamics, the majority were in the quite good category with a score mode of 3, and only one indicator criterion, namely leadership in the group, has a score mode in the good category. Overall, based on the group dynamics indicator criteria in the sufficient category, it can be interpreted that group members have the same motives to achieve common goals. However, differences of opinion and interests were still not always in line. There were different consequences of interactions between group members, depending on the tastes and skills of the individuals involved. Some members may be more active, creative, and initiative than others. The group has a clear organizational structure but is not yet optimal regarding the division of tasks, coordination, and communication. There was still a tendency to depend on certain leaders or members. The group has norms that regulate members'

behavior, but they have not been fully adhered to and adhered to. There were still violations or deviations that occurred, whether intentionally or not.

### 3.4. The Relationship Between the Role of Agriculture Extension Worker (AEW) and the Performance of Farmer Groups

Based on the calculation of the Spearman rank correlation test, the research results showed that the relationship between the role of the AEW and the performance of farmer groups shows a very strong relationship (0.875), a positive relationship (0.875), and a significant relationship ( $0.000 < 0.05$ ). The results of the correlation test between the role of the AEW and the performance of farmer groups are presented in Table 5.

**Table 5.** Relationship/Correlation of the role of AEW in the dynamics of farmer groups

Correlations				
			TOTAL_X	TOTAL_Y
Spearman's rho	TOTAL_X	Correlation Coefficient	1.000	.875**
		Sig. (2-tailed)		0.000
		N	65	65
	TOTAL_Y	Correlation Coefficient	.875**	1.000
		Sig. (2-tailed)	0.000	
		N	65	65
**. Correlation is significant at the 0.01 level (2-tailed).				

Based on Table 5, the relationship between the role of AEW and the performance of farmer groups was very strong, and this

was shown by a value of Rs of 0.875, meaning that AEW has a big influence on the success of farmer groups in managing their agricultural businesses. The role of the AEW in question includes,

among others, as a facilitator, educator, motivator, and organizer. These roles relate to AEW's ability to provide the latest information, innovation, and technology, encourage participation and independence of farmer groups, guide and direct farmer groups, provide facilities and incentives, and resolve problems or obstacles faced by farmer groups. This is in line with research, which states that the calculation result of the Rs value is 0.4872, which means that there is a real relationship between the role of field agricultural instructors and the performance of farmer groups [13]. This shows that the better the role of field agricultural instructors, the better the farmer group dynamics will be.

#### 4. CONCLUSION

Respondents' assessment of the role of field agricultural instructors was in a good category. This shows that field agricultural instructors (PPL) have performed their roles as facilitators, educators, motivators and organizers. Respondents' assessment of the performance of farmer groups was in the quite good category. This shows that: 1) group members have the same motive to achieve common goals, but there are still differences of opinion and interests that are not always in line, 2) There are different consequences of interactions between group members, depending on the feelings and abilities of the individuals involved, 3) some members may be more active, creative and initiative than others, 4) the group has a clear organizational structure, but is not yet optimal in terms of division of tasks, coordination and communication, 5) there is still a tendency to depend on certain leaders or members. The correlation between the role of AEW and the performance of farmer groups showed a very strong relationship (0.875), positive relationship (0.875) and significant relationship ( $0.000 < 0.05$ ).

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