

Factors Affecting the Role of Agricultural Extension Workers in the Development of Farmer Groups in West Koya Village, Jayapura City

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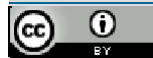
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ABSTRACT

This study aims to determine the factors that influence the role of agricultural extension workers in the development of farmer groups in Koya Barat Village. The method used was quantitative. The results showed that the role of agricultural extension officers in terms of the variable ability of motivation on average has been able to influence farmers in carrying out farming activities, correcting deficiencies and solving problems, providing information on assistance from the government, conducting training, and coaching from the center but less able to give awards to active members. For variable communication skills of farmer groups and farmers can be accepted both in the delivery of information, media, language used. For the variable of increasing farmers' knowledge in answering the types of superior seeds, good land processing, good types of fertilizers, how to control pests, smooth irrigation and irrigation until harvest. In the Farmer Income Variable, the presence of agricultural extension workers greatly affects the income of farmers through the information obtained in increasing the income of rice farmers.

INTRODUCTION

Cooperation between extension workers and farmer groups is needed to produce good and quality farmers. Therefore, extension workers act as organizers and dynamicators, namely fostering farmer groups directed at the implementation of the agribusiness system, increasing roles. The participation of farmers and extension workers by fostering cooperation between farmers and extension workers to develop their farms. In addition, the development of farmer groups is expected to help explore potential, solve the problems of farmer members more effectively and facilitate access to market information, technology, capital and other resources (Permentan, 2007 quoted by Samaria, 2021). Therefore, extension workers play an important role in guiding farmers to provide the best in managing their farms. To improve the effectiveness of the training work system and visits from extension activities to grow the role of farmers, agricultural development, training is carried out on farmer groups that have been formed so that later farmer groups are able to develop into adequate economic strength and subsequently be able to support the welfare of their members (Najib and Rahwita, 2010).

Efforts to improve farmers' human resources can be carried out through a learning process through extension guidance, training, field studies, mentoring and so on which must be adjusted to the needs of farmers and the ability of farmers in accordance with the situation and conditions faced by farmer groups (Supit, 2016). A farmer group is a group of several farmers gathered together and form a group that has the same goal (Sinaga, 2017). Farmer groups are a means to develop farmers in Indonesia. Agricultural policy is a series of actions that have been, are being, and will be implemented by the government to achieve certain goals, such as advancing agriculture, striving for agriculture to be more productive, production and production efficiency to rise, farmers' living levels higher (Widodo, 2012). In this case, the government carries out a policy to help problems that exist in agriculture, namely by forming farmer groups. From the formation of the farmer group, it is hoped that it can provide solutions for farmer workers in order to increase their income. And of course it can be used as a place to learn, gain experience and skills that they have never gotten.

The establishment of farmer groups in West Koya Village, Muara Tami District, Jayapura City is expected to foster active participation of the farming community in meeting needs. In addition, it can also function as a forum to train farmers, assist in terms of funding, borrowing agricultural equipment, as well as mentoring and supervision. West Koya Village, Muara Tami District, is one of the villages in Jayapura City, where the local community mostly makes a living of farmers in the field of growing rice, vegetables and tubers, the community uses its simple farming methods and only a small part has reached the use of modern technology today, as well as systems that have not been too supportive in increasing agricultural problems. Based on the background of the above problems, the objectives in this study are: How is the role of the Agricultural Extension group in the Development of farmer groups in West Koya Village, Jayapura City

THEORETICAL REVIEW

Definition of Agricultural Extension and Extension Workers

Agricultural extension is a learning process for main actors and business actors so that they are willing and able to help and organize themselves in accessing market information, technology, capital, and other resources, as an effort to increase productivity, business efficiency, income, and welfare, and increase awareness in preserving environmental functions (Vintarno et al., 2019). Meanwhile, agricultural extension can also be interpreted as an effort or effort to change the behavior of farmers and their families, so that they know and have the willingness and ability to solve their own problems in efforts or activities to improve their business results and level of life (A.G Kartasapoetra, 1987).

The government's objectives for agricultural extension are: increase food production, stimulate economic growth, improve the welfare of farming families and rural people, and strive for sustainable agriculture. To achieve the success of extension services, good quality and quantity extension workers are needed (Vintarno et al., 2019). This agricultural extension worker is a person who carries out the task of providing encouragement and direction to farmers so that they want to change their way of thinking, attitudes and behavior towards technological developments (A.G Kartasapoetra, 1987).

Farmer Group

According to Mulyana (2005) a group is a combination of two or more people who interact to achieve common goals, where the interaction that occurs is relatively fixed and has a certain structure. The structure of a group is an arrangement of a pattern between internal relations that is close to stable, consisting of: (1) a series of hierarchical statuses or positions of its members; (2) social roles related to those statuses; (3) cultural elements (values), norms that maintain, justify and perpetuate structure.

According to Mosher (2011), farmer groups can indirectly be used as an effort to increase farm productivity through simultaneous farm management. Farmer groups are also used as a medium for learning organization and cooperation between farmers. With the existence of farmer groups, farmers can jointly solve problems which include fulfilling agricultural production facilities, technical production and marketing of results. Farmer groups as a forum for organization and cooperation between members have a very important role in the life of the farming community, because all activities and problems in farming are carried out by the group simultaneously. Seeing this potential, farmer groups need to be further fostered and empowered in order to develop optimally.

While Adiaksa and Ilham (2023) said that a farmer group is a collection of farmers/ranchers/planters formed on the basis of common interests, environmental conditions (socio-economic-resources), and familiarity to improve and develop member businesses. Farmer groups are informal organizations developed from, by, and for farmers with the characteristics of knowing each other, familiar, and trusting each other, and having a division of

duties by mutual agreement. Farmer groups are also a forum for teaching and learning, a vehicle for cooperation to achieve economies of scale in terms of quantity, quality, and continuity.

Farmer Welfare Level

According to Soetrisno, (2008), the welfare level of farmers is one of the important factors in the development of the agricultural sector. At this time the level of farmer welfare is becoming a major concern, because the level of farmer welfare is estimated to be declining. Some factors that are suspected to be the cause of the decline in the welfare level of farmers include the following:

- a. The narrower the land owned by farmers.
- b. Prices of agricultural products tend to be low at harvest time.
- c. The increase in several input factors of agricultural production.

The level of welfare of farmers as all needs to be seen from various things, including the development of the amount of their expenditure both for consumption needs and for production. In this case, farmers as producers and consumers are faced with choices in allocating their income, namely:

- a. Meeting basic needs (consumption) for the survival of farmers and their families.
- b. Expenditure for agricultural cultivation which is his livelihood field which includes production and investment operational costs.

This second element is only possible if basic needs have been met, thus investment and the formation of capital goods are determining factors for the level of welfare of farmers.

METHODOLOGY

In conducting a research, it is important to have a methodology that is used, in order to achieve the research objectives (Tokang et al., 2023; Patmasari and Ilham, 2022). Therefore, this study utilized quantitative methods. The data used in this study are as follows: 1) Primary data, namely data obtained directly from the research location either through the author's observation of agricultural activities in West Koya Village, Muara Tami District, Jayapura City, asking informants or direct interviews with farmers who are members of local farmer groups or respondents. 2) Secondary data, namely data obtained from related agencies/institutions related to the role of farmer groups in socio-economic improvement in West Koya Village, Muara Tami District, Jayapura City.

The population in this study is farmers where farmer groups carry out role activities to improve the welfare of farmers. The total population is 251 farmers. From this number, a sampling technique is carried out using the *simple random sampling* method where each member is selected in simple random. The reason for using the *simple random sampling method* is because it is expected that the sample criteria obtained are really in accordance with the research to be carried out, namely farmers who are given the role of farmer groups. The number of samples taken was 15 farmers, with the reason that the average farmer in West Koya Village has characteristics that are not much different.

In this study, several data collection techniques were used, namely Observation was used to obtain primary data information about the role of

farmer groups in improving the socio-economy of farmers, both at home and directly in the field, 1) Interview is a process of interaction and communication in collecting data through asking directly to respondents, where in this study it is used to obtain information data about age level, education, family dependents, land area, farming experience, the role of farmer groups and others using questionnaires. 2) Documentation is data collection in the form of notes, transcripts, books, agendas and so on, this technique is used to obtain data on things needed in this study. The role of farmer groups can be measured using three indicators according to the Ministry of Agriculture Regulation/[Permentan: abbreviations in Indonesian] (2007) learning classes, cooperation vehicles, and production units. According to Iqbal (2014) stated that the level of role of farmer groups can be measured using the Gutman Scale, which describes the three indicators into several question items that have been compiled in questionnaires and each question item is given a score according to the respondent's choice. The question item in the question list or questionnaire consists of two alternative choices or responses, namely Ever (score 2), Never (score 1).

According to Suparman (2011) to find out the number of class intervals needed, the level of role of farmer groups divided into 2 classes (low and high) can be determined using the formula, namely:

$$\text{Interval} = \frac{X_n - X_i}{K}$$

Information:

C : Class Interval

K : Number of Classes

X_n : Maximum Score

X_i : Minimum Score

RESULTS

Factors affecting the Role of Agricultural Extension Workers in the Development of Farmer Groups in West Koya Village, Jayapura City.

1. Identify motivational ability variables

The ability to provide motivation from agricultural extension workers will illustrate the assessment of the ability to provide motivation for agricultural extension workers to farmers in farmer groups. The responses of respondents to this, can be seen from 5 indicators, shown in the table as follows:

Table 1. Respondent Responses Motivation Ability

No	Information	A	B	C	D	E	Qty
1	Extension workers are able to reward members who are active in farmer groups	67%	0	0	33%	0	100

2	Extension workers are able to influence group members to carry out activities related to farming for the progress of their agriculture	0	0	0	53%	47%	100
3	Extension workers are able to encourage members to correct deficiencies and solve problems in the group	0	0	0	47%	53%	100
4	Extension workers are able to inform matters related to farming activities in the group such as assistance from the government, training, and guidance from the center	0	0	0	60%	40%	100
5	Extension Able to carry out activities in conducting counseling?	0	0	0	80%	20%	100

Data source : Processed, 2024

Description : A = Very Incapable, C = Underprivileged, E = Very capable B = Incapable D = Capable

From the 5 questions above, it shows that, on average, farmers feel that agricultural extension workers in providing motivation to farmers are very capable, seen from being able to carry out activities in conducting extension services with results of 80% capable, extension workers are able to inform matters related to agricultural activities in the group such as assistance from the government, training, and coaching from the center with results of 60% able and 40% very capable, Extension workers are able to encourage members to correct deficiencies and solve problems in the group with research results of 53% Very capable and 47% Able, Extension workers are able to influence group members to carry out activities related to farming for the progress of their agriculture with results of 53% Able and 47% very capable. As for the variable of Extension Workers being able to reward members who are active in farmer groups, it shows that 67% are Very Very Incapable and 33% are Capable.

2. Variable Frequency of Extension

The frequency of extension services from agricultural extension workers will illustrate the assessment of the ability of extension workers to visit farmers in farmer groups. The responses of respondents to this, can be seen from 5 indicators, shown in table 2 as follows :

Table 2. Respondent Responses Frequency of Counseling

No	Information	A	B	C	D	E	Qty
1	Whether extension workers are able to come according to a predetermined schedule	0	0	0	53%	47%	100
2	Whether extension workers are able to attend other than the schedule set to carry out extension activities	0	0	0	67%	33%	100
3	Are extension workers able to come when other members need problem-solving needs in farming?	0	0	0	60%	40%	100
4	How much time do extension workers provide in conducting extension activities?	0	0	100%	0	0	100
5	What is time provided by extension workers to carry out every time extension activities are sufficient for farmers	0	0	0	73%	27%	100

Data source : Processed, 2024

Description : A = Very Incapable, C = Underprivileged, E = Very capable B = Incapable D = Capable

For the variable frequency of extension visits consists of 5 questions, namely extension workers are able to come according to a predetermined schedule and the results show that 53% are able and 47% are very capable, for the question of whether extension workers are able to attend other than the schedule set to carry out extension activities, the results are 67% able and 33% very capable. For questions of extension workers who are willing to come when other members need problem-solving needs in farming, the results show that 60% are capable and 40% are very capable. Continuing the question of how much time extension workers provide in carrying out extension activities, the results show that 100% are less able for agricultural extension workers to provide time. Time The extension workers provide to carry out every extension activity is sufficient for farmers.

3. Communication ability variables

The communication ability of agricultural extension workers from agricultural extension workers to farmers will illustrate the assessment of the

communication ability of extension workers when visiting farmers in farmer groups. The responses of respondents to this, can be seen from 5 indicators, shown in table 3 as follows

Table 3. Respondent Responses Communication Skills

N o	Information	A	B	C	D	E	Qty
1	Whether the delivery of extension information can be well received by farmers	0	0	0	80%	20%	100
2	Whether in delivering information extension workers use media that are easy to understand	0	0	0	67	33%	100
3	Whether extension workers are able to listen or help resolve problems and complaints expressed by farmers or members	0	0	0	67%	33%	100
4	Whether extension workers are able to communicate in a language that is easily understood and understood by farmers or members	0	0	0	67%	33%	100
5	Are extension workers able to convey information according to the problems faced and needed by farmers?	0	0	0	73%	27%	100

Data source : Processed, 2024

Description : A = Very Incapable, C = Underprivileged, E = Very capable B = Incapable D = Capable

For the variable frequency of communication skills, it means how respondents respond to extension communication with farmers consisting of 5 questions, namely 1). Whether the delivery of extension information can be well received by farmers, the results show that 80% are capable and 20% are very capable, 2). Whether in delivering information extension workers use media that is easy to understand, the results show that 67% stated that extension workers are capable and 33% stated that extension workers are very capable. 3). Whether extension workers are able to listen or help solve problems and complaints expressed by farmers or members, the result is that 67% say they are capable and 33% say they are very capable. 4). Whether extension workers are able to communicate in a language that is easily understood and understood by

farmers or members, the results are 67% said they are capable and 33% showed they are very capable. 5). Whether extension workers are able to convey information according to the problems faced and needed by farmers, the results are 72% said they are able and 27% said they are very capable.

4. *Variable Farmer Knowledge About Seeds*

The ability of farmers after receiving assistance from agricultural extension workers about seeds, Here will be measured the extent of the farmer's ability to answer questions or knowledge about seeds or seedlings. This can be seen from 5 indicators, shown in table 4 as follows

Table 4. Knowledge Of Respondents About Seeds.

No	Information	1	2	3	4	5	Qty
1	Name the cropping system based on the planting distance you know	0	67%	20%	13%	0	100
2	Name the high-yielding seed varieties that you know	7%	33%	40%	13%	7%	100
3	Mention considerations in choosing a variety to plant	0	7%	47%	33%	12%	100
4	Mention the advantages of using quality seeds!	0	13%	20%	40%	27%	100
5	Good criteria where to make a good seeding is?	0	7%	27%	40%	26%	100

Data source : Processed, 2024

Description : 1 = Unable to answer, 3 = able to answer 2 answers 5 = can answer more than 3 2 = can answer 1 answer 4 = can answer 3 answers

For the Farmer Ability Variable about seeds, it consists of 5 questions, namely: 1). Name the planting system based on the planting distance that you know, then the respondents' results show that 67% of farmers can answer 1 answer, from the results are SRI, Jajar Legowo, Conventional, Tapak Macan. 2). Name the superior seed varieties that you know, then the respondents' results, namely 40%, can answer 2 answers from the answer results, namely pandanwangi, picking milk, mekongga. 3). Mention considerations in choosing varieties to be planted, the results show that 47% can answer 2 answers, from the answers are High yield potential, resistance to pests and diseases, tolerance to environmental stress, planting area conditions, market desires. 4). Mention the advantages of using quality seeds, from the results of the study showed that 44% can answer 3 answers from the answers are Seeds grow fast and synchronously, If seeded will produce strong and healthy seeds, When transplanted seedlings grow faster, The number of plants is optimal so that it will give high yields. 5). Good criteria for a good seeding place, the results showed that 40% of farmers can answer 3 correct answers from the answer is the location not far from the planting place, the seeding place is given

additional organic fertilizer to provide nutrients, the beds are adjusted to the needs, the availability of sufficient water

5. *Variable Farmer Knowledge About Land Processing*

The ability of farmers after receiving assistance from agricultural extension workers about land processing. Here will be measured the extent of the ability of farmers to answer questions or knowledge about land processing. This can be seen from 5 indicators, shown in table 5 as follows:

Table 5. Respondents' Knowledge on Land Processing.

No	Information	1	2	3	4	5	Qty
1	What are the advantages of using hand tractors	0	13 %	40%	20%	27%	100
2	What are the activities that must be carried out in land processing	0	0	0	13%	87%	100
3	Tillage aims for anything	0	7%	40%	33%	20%	100
4	The pH of good soil for planting is in the range of	0	13 %	87%	0	0	100
5	The ideal tillage time should be done at	0	0	0	100 %	0	100

Data source : Processed, 2024

Description: 1=Unable to answer, 3=able to answer 2 answers 5=can answer more than 3 2 = can answer 1 answer 4 = can answer 3 answers

For the Variable Ability of farmers about land processing, consists of 5 questions, namely: 1). What are the advantages of using hand tractors, the answer is (Cheaper price, easier maintenance, can be used on smaller rice plots, easier use does not require high skills, then the results showed 40% of respondents can answer 2 correct answers. 2). What are the activities that must be done in land processing, the answer is cleaning, hoeing, plowing, harrowing, and the results of research show 87% of respondents can answer more than 3 correct answers. 3). Tillage aims for anything, the answer is to improve soil structure, apply fertilizer to make it more even, clean weeds and rice plants left over from previous harvests, reduce the rate of erosion. So the results showed that 40% of respondents could give 2 answers. 4). The pH of good soil for planting i.e. ranges between and the answer is 13% of respondents can answer quite correctly and 87% correctly. 5). The ideal tillage time should be done on, the answer is cleaning, hoeing, plowing, harrowing. And the results showed that 100% of respondents could give 2 answers.

6. *Variable Farmer Knowledge About Fertilizer*

The ability of farmers after receiving assistance from agricultural extension workers about fertilizers. Here will be measured the extent of the farmer's ability to answer questions or knowledge about fertilizer. This can be seen from 5 indicators, shown in table 6 as follows

Table 6. Respondents' knowledge of Fertilizer

No	Information	1	2	3	4	5	Qty
1	Name the various types of fertilizers used in your farming	0	86%	7%	7%	0	100
2	The purpose of fertilizing plants	0	13%	27%	47%	13%	100
3	The ideal fertilization activity is carried out at the time of	0	7%	20%	60%	13%	100
4	What are the advantages of fertilizing with the spray technique	0	33%	27%	33%	7%	100
5	The macro nutrients needed by plants are:	7%	13%	13%	27%	40%	100

Data source : Processed, 2024

Description: 1=Unable to answer, 3 = able to answer 2 answers 5 = can answer more than 3 2 = can answer 1 answer 4 = can answer 3 answers

For the Variable Ability of farmers about fertilizer, consists of 5 questions, namely: 1). Name the various types of fertilizers used in your farming, the answers are inorganic fertilizers, manure, compost, liquid organic fertilizers, the results showed 87% of respondents could answer 1 answer. 2). The purpose of fertilizing plants is to increase production yields, accelerate harvest life, add nutrients to the soil, improve soil structure, the results showed 47% of respondents could answer 3 correct answers. 3). The ideal fertilization activity is carried out at the time of The answer is tillage, maintenance, before harvesting, age 30 days, the results showed that 60% of respondents could answer 3 correct answers. 4). What are the advantages of fertilizing with spray technique the answer is Faster entry into plants, efficient because it can be mixed with ZPT and pesticides, More efficient fertilizer, More evenly distributed on plants, the results showed that 33% of respondents could answer 1 correct answer. 5). Macro nutrients needed by plants ie.. the answer is Nitrogen, Passport, Potassium, Calcium. The results showed that 40% of respondents could answer more than 3 answers.

7. Farmer's Knowledge Variables About Pest and Disease Control

The ability of farmers after receiving assistance from agricultural extension workers on pest and disease control. Here will be measured the extent of the farmer's ability to answer questions or knowledge about pest and disease control. This can be seen from 5 indicators, shown in table 7 as follows:

Table 7. Respondents' Knowledge of Pest and Disease Control

No	Information	A	B	C	D	E	Qty
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1	Pest and Disease Control	0	7%	20	40	33	100
				%	%	%	
2	Diseases affecting plants	0	27	33	13	27	100
			%	%	%	%	
3	Controls that can be done to combat leafhopper disease are:	7%	33	33	20	7%	100
			%	%	%		
4	Rat pest control can be done by:	0	53	7%	40	0	100
			%		%		
5	Gold snail pests can be used as	0	87	13	0	0	100
			%	%			

Data source : Processed, 2024

Description: 1 = Unable to answer, 3 = able to answer 2 answers 5 = can answer more than 3 2 = can answer 1 answer 4 = can answer 3 answers

For the Variable Ability of farmers' knowledge about pest and disease control, consists of 5 questions, namely: 1). Pests that attack plants are, the answers are rice field snails, mice, birds, caterpillars, leafhoppers, stem borers, klapar, tungro, research results show that 40% of respondents can answer 3 answers. 2). Diseases that attack plants, the answer is root rot, leaf burn, blast, bacterial blight, brown spot, stem rot, fusarium, yellow dwarf, the respondent's answer is that at most 33% of respondents can answer 2 correct answers. 3). Controls that can be done to combat leafhopper disease are using planthopper resistant varieties, clearing weeds in fields, planting seeds directly, planting synchronously, crop rotation, the results showed that on average 66% respondents could answer 2-3 correct answers. 4). Rat pest control can be done by, the answer is gropyokan, natural enemies (owls), sanitation, crop turnover, the results showed that 53% of respondents answered 1 correct answer. 5). Gold snail pests can be used as, the answer is the ingredients for making MOL, animal feed, cooked, Liquid Organic Fertilizer, then the results of respondents answered at most 87% can answer 1 correct answer.

8. Variable Farmer Knowledge About Irrigation

The ability of farmers after receiving assistance from agricultural extension workers about irrigation. Here will be measured the extent of the ability of farmers to answer questions or knowledge about irrigation. This can be seen from 5 indicators, shown in the table as follows :

Table 8. Respondents' Knowledge of Irrigation

No	Information	A	B	C	D	E	Qty
1	Name the irrigation system you know!	0	73%	7%	13%	7%	100
2	Purpose carried out irrigation	0	40%	47%	7%	7%	100

3	The availability of irrigation water for rice fields is increasingly limited because	0	20%	20%	53%	7%	100
4	Irrigation is carried out at any time	0	0	13%	33%	53%	100
5	One of the irrigation techniques is an intermittent system, that is, with the aim of	0	33%	27%	27%	13%	100

Data source : Processed, 2024

Description: 1 = Unable to answer, 3 = able to answer 2 answers 5 = can answer more than 3 2 = can answer 1 answer 4 = can answer 3 answers

For the Variable Ability of farmers' knowledge about pest and disease control, consists of 5 questions, namely 1). Name the irrigation system that you know the answer is technical, semitechnical, simple, tidal land, rainfed land, the results showed that 73% of respondents could answer 1 correct answer. 2). The purpose of irrigation, respondents the result is 47% of respondents can answer 2 correct answers from the answer: nutrients are easily absorbed by plants, facilitate soil processing, drain fertilizer with water, improve physical, chemical and biological properties of the soil. 3) The availability of irrigation water for rice fields is increasingly limited because, the results of 53% respondents can answer 3 correct answers from the answers: shorter rainfall duration, the occurrence of silting of reservoirs, non-existent local water source reserves, increased water use for the industrial and household sectors. 4). Irrigation is carried out at any time, the results of the study, 53% of respondents can answer more than 3 answers, namely: the beginning of land processing, the first week after planting, the third week, and the period of the grain out. 5). One of the irrigation techniques is an intermittent system, namely with the purpose, the results showed that 33% of respondents could answer 1 correct answer, the answer consisted of saving irrigation water, preventing iron poisoning, homogenizing grain ripening, speeding up harvest time.

9. Variable Farmer Knowledge About Harvest

The ability of farmers after receiving assistance from agricultural extension workers about harvesting. Here will be measured the extent of the farmer's ability to answer questions or knowledge about the harvest. This can be seen from 5 indicators, shown in table 9 as follows:

Table 9. Respondents' Knowledge About Harvesting

No	Information	A	B	C	D	E	Qty
1	The advantages of using a power thresher machine are:	0	7%	13%	33%	47%	100
2	The characteristics of plants ready to be	0	7%	20%	60%	13%	100

harvested are:							
3	To reduce yield losses can be done by:	0	33%	13%	47%	7%	100
occurs at stages							
4	The process of yield loss occurs at stages	0	8%	53%	20%	7%	100
due to.							
5	Too early or late harvest causes quality to decrease due to.	0	8%	0	33%	47%	100

Data source : Processed, 2024

Description: 1 = Unable to answer, 3 = able to answer 2 answers 5 = can answer more than 3 2 = can answer 1 answer 4 = can answer 3 answers

For the Variable Ability of farmers' knowledge about Harvest consists of 5 questions, namely 1). The advantages of using a power thresher machine, the results showed that 47% of respondents could answer more than 3 correct answers, namely saving labor and time, easy to operate, reducing crop losses, greater working capacity. 2). The characteristics of the plant are ready to be harvested, the results of 60% respondents can answer 3 correct answers, the answer is that the grains have turned yellow, the grain moisture content ranges from 21-24%, many rice ducks until it collapses, rice leaves are pseudo-yellow. 3). To reduce crop loss can be done in what way, the answer results of respondents 47% can answer 3 correct answers with the answer is transportation of results using a plastic base, use of a base at the time of stacking, use of a jagged sickle for cutting, threshing using a power thresher machine. 4). The process of crop loss occurs at stages, the results showed 53% of respondents could answer 2 correct answers, with answers consisting of harvesting, threshing, milling, drying, transporting. 5). Causes Too early or late harvest causes quality to decrease, the results of respondents show 47% can answer more than 3 correct answers, with answers consisting of Easily attacked by pests, Rice taste bad, Grain becomes difficult to grind, Many grains fall off easily, Many green grains and contain lime.

DISCUSSION

Factors affecting the Role of Agricultural Extension Workers in the Development of Farmer Groups in West Koya Village, Jayapura City., 2024. In essence, farmers in increasing farm income really need agricultural extension workers, whose functions and duties are to counsel, prepare, implement, develop, evaluate and report on extension activities. In addition, it looks at problems in the field, farmers' problems, farmers' needs and agricultural development orientation, and the role of extension workers as advisors, technicians, liaison, organizers, and reform agents. This research was conducted in West Koya Village, Jayapura City with a sample of 15 farmers who were included in 3 farmer groups. The characteristics of respondents are the average age of 47 years, the last education is the most junior high school graduates, the number of family members is 4 people, the area of agricultural land is 1/2 ha with farmers being rice farmers, using the legowo row cultivation system. The results showed that the role of agricultural extension workers in West Koya

Village in terms of the variable motivation ability on average has been able to influence farmers in carrying out better farming activities, correcting deficiencies and solving problems, providing information on assistance from the government, conducting training, and coaching from the center but less able to reward members who are active in farmer groups. For variable frequency of counseling, it is timely to visit farmer groups with an average of 1-2 hours per visit. For variable communication skills with farmer groups and farmers can be accepted both in the delivery of information, media, language used. For variables, farmers' knowledge increases in answering superior seed types, good land processing, good types of fertilizers, how to control pests, smooth irrigation and irrigation until harvest. Furthermore, the Farmer Income Variable, shows that the existence of agricultural extension workers greatly affects farmers' income because there is a lot of information obtained by farmers in increasing income from rice farmers' agricultural products. Average income Rp. 12.000.000. With a production yield of approximately 4 tons and a land area of 3/4 hectares.

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the study, it can be concluded that the role of agricultural extension workers in the development of farmer groups in West Koya Village, Jayapura City, consists of 15 respondents. Characteristics of respondents with an average age between 36 years - 55 years, with 3 farmer groups and an average junior high school graduate, the type of variety is rice farmers. For the role of agricultural extension workers, it is seen from the responses of farmers through the results of respondents showing that the variables of motivational ability, frequency of extension, communication skills between agricultural extension workers and farmers the result is that agricultural extension workers are categorized as capable of 3 variables. While the variable to assess the ability of farmers after getting after being accompanied by agricultural extension workers, shows that in terms of knowledge about seeds, knowledge of land processing, knowledge of fertilizers, knowledge of pest control, knowledge of irrigation, knowledge of average harvest can answer 2-3 correct answers. So it can be concluded that the role of agricultural extension workers has been very useful and has an impact on the development of farmer groups in West Koya Village with the result of increasing the net income of rice farmers Rp. 12,000,000 every time they harvest for a land area of 3/4 hectares.

FURTHER STUDY

This research was only conducted in Koya Barat Village, which is one of the villages in the Muara Tami District. So it is expected that there will be similar research in other villages in the Muara Tami District area. Given that the Muara Tami area is the center of production of agricultural commodities, Kota Jayapura

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