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Research Article

Effectiveness of Agricultural Extension Communication of Spinach Farming

Asriel Sumurung Pasaribu[a,1], Ridha Rizki Novanda[a,2,*]

[a] Department of Socio Economic Agriculture, Faculty of Agriculture, University of Bengkulu, Bengkulu, Indonesia

[1]pasaribu@gmail.com; [2]rrizkin@unib.ac.id*

* Corresponding Author

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ABSTRACT

This study aimed to analyze Agricultural Extension Communications' effectiveness in Spinach Farming in Kasturi Farmer Groups in Pulo Jantan Village, Na IX-X District. This study was conducted on a Kasturi farmer group in Pulo Jantan Village, NA IX-X District, Labuhanbatu Utara Regency. The research location was determined intentionally (purposively), considering that the farmer group was classified as active in extension activities. The method used to collect data is using interview techniques using prepared questionnaires. Data analysis was performed using descriptive analysis to get a clearer picture and detail about a situation based on the information obtained, collected, classified, and interpreted to get the information necessary to analyze the existing problems. The result is that communication of agricultural extension workers in spinach farming in the Kasturi farmer group in Pulo Jantan Village, Na IX-X District, is categorized as effective. This is seen from the percentage of 3 aspects, namely cognitive, affective and conative, in the effective category. The most practical aspect of counseling communication is the cognitive aspect, with the highest percentage of effective categories. It is better if agricultural extension workers can adapt the material presented according to the problems farmers face.

INTRODUCTION

Agriculture is a very important sector since the increasing population of Indonesia leads to the need for food will also increase. Hence, the agricultural sector makes efforts to increase food production through intensification, diversification, and extensification. In practice, farmers play an important role so that agricultural development is more successful; therefore, agricultural extension workers are very important in encouraging and mobilizing farmers to make their farming more effective and efficient with the hope of agricultural development towards a better and increasing quality of human resources (Effendi, 2005). Agricultural extension workers are the spearhead of all extension activities. With the presence of extension, farmers can be fostered and guided by good communication and still provide strong encouragement and confidence in farmers to believe in and accept the benefit of new things (Batlayeri, 2013).

Effective communication can bring out the same meaning of the message or information between the sender and the recipient (Rogers, 1983). Extension communication can be said to be effective if the message conveyed by the extension worker can be well received and can cause behavioral changes among farmers. Changes in farmer behavior contain three domains used as communication effectiveness indicators: cognitive, affective, and behavioral or conative (Saefudin, 2016). Effective communication occurs if you have the same understanding of information between each group member in receiving information. The effectiveness of extension through communication and improvement of farmer skills through groups will provide optimal results (Tubs, 2000). In this regard, the government has launched a group institutional development program that receives intensive and continuous guidance from the government (Rintjap, 2015).

Counseling is very helpful for farmers to analyze and interpret the developing situation so that farmers can make forecasts ahead and minimize possible problems that will be faced. In addition, agricultural extension activities are a learning process for farmers through a group approach. They are directed at the realization of more effective cooperative abilities so that they can implement innovations and overcome various risks of farming failure.

Pulo Jantan Village is one of the villages located in the Na IX-X district, Labuhanbatu Utara Regency. In the village, a Kasturi farmer group does spinach vegetable farming. Kasturi farmer group is a farmer group that produces spinach vegetables to be marketed outside the sub-district area, this farmer group sustainably conducts their farming, and this farmer group is a farmer group as a spinach producer whose marketing reaches markets outside their area. Kasturi farmer group is still actively involved in extension activities carried out by field agricultural extension workers to develop spinach farming so that communication exists between the extension workers and members of the farmer groups.

Each farmer in an area has different characteristics; therefore, the presentation of communication also needs to be adapted to each region. Farmers in isolated rural areas can become more effective if they are given counseling through two-way dialogue and an interpersonal approach. There is a positive or negative relationship between the communication competence possessed by the extension worker and the behavior of farmers in managing their resources. So it is necessary to pay attention to the effectiveness of agricultural extension communication in amaranth farming in Kasturi farmer groups in Pulo Jantan Village, NA IX-X District. This study aimed to analyze Agricultural Extension Communications' effectiveness in Spinach Farming in Kasturi Farmer Groups in Pulo Jantan Village, Na IX-X District.

METHOD

This study was conducted on a Kasturi farmer group in Pulo Jantan Village, NA IX-X District, Labuhanbatu Utara Regency. The research location was determined intentionally (purposively), considering that the farmer group was classified as active in extension activities. The method used in sampling is using the census method. Census is a sampling technique in which all population members are used as samples. Based on this understanding, it can be seen that the census is a sampling technique with all population members. The method used to collect data is using interview techniques using prepared questionnaires. The types of data collected in this study are primary and secondary data. Data analysis was performed using descriptive analysis to get a clearer, and more detailed picture of a situation based on the information obtained, collected, classified, and interpreted to get the information necessary to analyze the existing problems.

Three indicators are used to measure the effectiveness of the extension worker's communication: effective, moderately effective, and ineffective. The three indicators are described in a questionnaire using the Gutman scale method. The descriptive analysis comes from the categorization of communication effectiveness variables.

- Category criteria:
- Effective
- Sufficiently Effective
- Ineffective

The formula for finding the percentage of effectiveness:

$$P=f/(n) \text{ X } 100 \%$$

Description:
P = Percentage

f = Total score achieved
n = Total maximum score

Categorization of the level of effectiveness, namely:
Effective = If P > 66.66%
Sufficiently Effective = If 33,33 % < P 66.66%
Ineffective = If P 33.33%

Table 1. Variable Description

Variable	Sub-Variable	Indicator
Communication Effectiveness	Cognitive	*Knowledge* *Comprehension* *Application*
	Affective	Realizing Living Confident and willing to follow
	Conative	Speed Precision Accuracy

RESULTS AND DISCUSSION

Characteristics Of Respondent

Table 2. Characteristics Of Respondent

	Characteristic	%
Age	34-44 years	52
	45-55 years	24
	56-66 years	24
Gender	Female	100
	Male	0
Education	SD	44
	SMP	40
	SMA	16
Number Of Family Dependents	1-2 people	20
	3-4 people	64
	5-6 people	16
Experience	4-7 years	28
	8-11 years	40
	12-15 years	12

Table 2 shows that the majority of respondents are in the age group of 34-44 years or 52%, while the age group of 45-55 years is 24%, and the age group 56-66 years is 24%. so that the average age of farmers is 46 years, this shows that members of farmer groups are still of productive age so that in extension activities, members of farmer groups are still actively participating in learning and experience from agricultural extension workers.

The gender of all respondents is female since the Kasturi farmer group is a female farmer group in the Pulo Jantan village. The female members of the Kasturi farmer group are members of the group to cultivate spinach, and this is because it can help the family economy to meet the needs of their respective households.

The education level of the majority of respondents was at the elementary level, which amounted to 11 people or 44%. The junior high school education level was 10 people or 40%, and for the high school education level, as many as 4 people or 16%. It shows that the education level of the Kasturi farmers group members is still relatively low because the average education of farmers is still at the elementary and junior high school

levels. However, it does not measure these farmers' knowledge and experience because they can add insight and knowledge through counseling conducted by field agricultural extension workers.

The number of family members of most respondents amounted to 3-4 people, and the number of family members was 64%. On average, respondents have a large number of family responsibilities. Working as a farmer increases income so the family economy can be achieved.

The farming experience of most respondents is 8-11 years, 40%, while their farming experience within 4-7 years is 28%, and farming experience of 12-15 years is 12%, so the average farming experience of respondents is 9 years. This statistic shows that farmers already have sufficient experience in farming. Besides, farmers must also always increase their knowledge about the development of farming using technology. Therefore, it is important to follow counseling to increase knowledge and insight into farming.

Effectiveness of Extension Communication

Extension communication can be said to be effective if the message conveyed by the extension worker can be well received and can cause behavioral changes among farmers. In this study, changes in farmer behavior were measured using the variables of communication effectiveness, namely cognitive, affective, and conative. The effectiveness of extension is determined by the aspect of the small role of extension, linear communication model, weak functioning of extension, and lack of precise extension orientation (Kustriani et al., 2012).

Table 3. Effectiveness of Extension Communication

	Category	Persentase (%)
Cognitive	Ineffective	0
	Sufficiently Effective	24
	Effective	76
Affective	Ineffective	24
	Sufficiently Effective	24
	Effective	52
Conative	Ineffective	24
	Sufficiently Effective	8
	Effective	68

1. Cognitive

The cognitive aspect of agricultural extension activities is to increase the knowledge and insight of members of farmer groups. The information conveyed by the extension workers is aimed at the farmers' thoughts. Agricultural extension activities effectively increase the knowledge and insight of members of farmer groups in farming. Knowledge and insight about farming help understand the surrounding events and answer the curiosity of farmer group members in agricultural issues. The cognitive impact is increased farmers' knowledge about their farming problems. The results showed that the cognitive aspect of agricultural extension activities carried out in the Kasturi farmer group could be said to be effective, and it could be seen from the percentage of respondents who had an effective category of 76%, a moderately effective category of 24% while an ineffective category of 0% (Table 3).

Agricultural extension carried out in the Kasturi farmer group can increase knowledge and insight for members of the Kasturi farmer group. Farmers gain new knowledge from the extension worker on cultivating spinach, starting from land management, fertilization, and controlling pests (Murbianyanto, 194; Mosher, 1997). This activity can provide benefits for farmers to increase the productivity of spinach farming. Increasing the productivity of spinach farming can help the economy of their respective households. The value of the effectiveness of the extension's communication from the cognitive aspect has an average percentage of 84.88 %. This number shows that the extension worker's activities are effective (Wunawarsih, 2018). According to Mulya (2017), stating that agricultural instructor communication is effective in growing the knowledge (cognitive) of farmers. The results of this study are also in line with Saefudin's study (2016), which states that agricultural instructor communication in the cognitive aspect can provide increased knowledge of farmers in their farming. The instructor's credibility and internal motivation will be a personal extension worker in countering negative access and providing information to others (Nefri, 2018).

2. Affective

The affective aspect of agricultural extension activities is the change in attitudes and views of members of farmer groups. The information conveyed in the extension activities is aimed at moving the hearts of the members of the farmer group and causing a change in the attitude of the members. Changes in the attitude of members of the farmer group are in the form of being willing to accept and apply technology such as land management, pest control, and fertilization.

Table 3 shows that the affective aspect causes changes in the attitudes and views of each member of the farmer group. It is indicated by the percentage of the effective category at 52%, the moderately effective category at 24%, and the ineffective category at 24%. The percentage with the highest number is in the effective category, which means that the extension carried out can change the views and attitudes of farmers to want to apply the material presented by the extension worker. The farmers want to change their behavior because the material presented is very good to be applied in spinach farming activities. Extension materials have good benefits and goals to increase the production of spinach farming, but some farmers do not want to change their attitude or desire to apply them because they do not want to try new things. The value of the effectiveness of the extension's communication from the affective aspect has an average percentage of 70.66%, which shows that the extension worker's extension activities can be said to be effective.

The results of this study align with the results of Mulya's study (2017) that the level of effectiveness in the affective aspect is classified as effective. This study's results indicate a great change in attitude after participating in counseling activities. Furthermore, Saefudin (2016) states that the existence of agricultural extension activities can increase farmers' interest and change their attitude toward their farming.

3. Conative

Conative aspects are changes in behavior or actions that occur in farmer groups. The conative aspect relates to the behavior and intentions of farmers to make changes in farming activities following the counseling that has been done. The most effective agricultural extension activity is the desire of farmers to carry out the advice of the extension worker and apply the information conveyed in agricultural extension activities.

Table 3 shows that extension activities can change the behavior and intentions of farmer group members to make changes in farming activities. It can be seen from the percentage of the effective category of 68%, the category of quite effective 8%, and the ineffective category of 24%. The majority percentage is in the effective category, which means that the farmers are enthusiastic about making changes in their farming activities following the extension that has been done. The farmers are willing to try and want to apply because they believe that the extension carried out can provide benefits and increase the results of their farming (Kartasapoetra, 1987; Mardikanto, 1996). However, some farmers are in a low category, meaning they do not want or are still hesitant about the extension, so they choose not to apply it. The value of the effectiveness of the extension's communication from the conative aspect has an average percentage of 72.44%, which indicates that the extension worker's activities can be said to be effective.

Saefudin (2016) and Sikumbang et al. (2019) state that changes in behavior and actions occur from members of farmer groups towards their farming after participating in agricultural extension activities. However, the results of this study are inversely proportional to the results of Mulya's study (2017), which shows that agricultural extension communication in the conative aspect is classified as less effective in changing the behavior of farmers in carrying out their farming Mastery of the extension material is very important in achieving the results of the extension (Aniar, 2019).

CONCLUSION

Communication of agricultural extension workers in spinach farming in the Kasturi farmer group in Pulo Jantan Village, Na IX-X District, is categorized as effective. This is seen from the percentage of 3 aspects, namely cognitive, affective and conative, in the effective category. Of the three aspects, the most effective aspect of counseling communication is the cognitive aspect, with the highest percentage of effective categories. The extension worker's material can increase farmers' knowledge and insight. However, the affective and conative aspects or changes in views and decisions applied by farmers to the material presented by the extension worker are still ineffective because farmers are not sure about the extension material provided. Delivered by field instructors, some farmers do not want to apply the knowledge gained from the extension worker.

It is better if agricultural extension workers can adapt the material presented according to the problems farmers face. The importance of increasing farmers' confidence to change their views and decisions regarding land management, pest control in plants, and fertilization of plants, so that farmers are willing to apply and try the material presented by extension workers in their farming.

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