COMMUNICATION STRATEGY OF FIELD AGRICULTURAL EXTENDERS IN THE SOCIALIZATION OF RICE AGRICULTURAL INNOVATIONS IN DRY LAND TO FARMERS GROUP IN JATIGREGES VILLAGE, PACE DISTRICT, NGANJUK REGENCY

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Abstract

Communication and development are two things that cannot be opened and are closely related. One sector that requires a special touch of development communication is the agricultural sector. This study was to determine the communication strategy of Field Agricultural Extension in disseminating innovations in dryland rice cultivation to farmer groups in Jatigreges Village, Pace District, Nganjuk Regency. The research method used is descriptive qualitative. The data in this study were collected by interview, observation and documentation. Then it is processed using Hafied Cangara’s Five-Step communication strategy theory and the Innovation Diffusion Theory created by Everett M. Rogers. The results showed that the Field Agricultural Extension did the communication stages, namely research, planning, implementation, measurement, and reporting. The communication strategy implemented by PPL was relatively successful because 89.7% of the targets for the implementation of the innovation program for rice cultivation were in dry land. This is because an innovation program contains important points from the theory of diffusion of innovation, namely, compatibility, complexity, testability, and observability.

Keywords—Communication Strategy; Agricultural Extension; Innovation; Farmers

1. INTRODUCTION

One sector that requires a special touch of development communication is the agricultural sector. The development of the agricultural sector in addition to improving the quality and quantity of agricultural products, can also encourage economic growth and the welfare of the community, especially farmers. However, efforts to increase the role of the agricultural sector which leads to increased income and welfare of farmers are faced with various problems. The problems include the limited availability of seeds in terms of quantity, quality and time, the threat of climate change, the occurrence of continuous land conversion and limited productive land. Then, the lack of interest of the younger generation to enter the agricultural sector, the loss of yields is still high, and price fluctuations tend to provide less incentive for farmers to produce. But the most important thing is the lack of access of farmers to sources of technological innovation.
Farmers who are members of a farmer group are still limited in their ability to access information and technological innovation, especially in the agricultural sector. This hinders their ability to increase farm productivity, income, and welfare. Contrary to this reality, a strategy is needed to make access to information and existing technological innovations more open and easy, so that it is hoped that empowerment and revitalization of participatory, wise, and mutually beneficial agricultural development will be realized. The communication strategy for agricultural development that is most needed today is agricultural innovation for the problem of limited agricultural productive land.

The problem that is currently being focused on by the Ministry of Agriculture of the Republic of Indonesia is the limitation of productive agricultural land. This limitation of agricultural productive land is indicated by the rapid development of infrastructure in agricultural production centers and the slow realization of adding paddy fields. Especially in Nganjuk Regency, the industrial area is estimated to increase by 60% in 2019. This causes a decrease in agricultural productive land to tens of thousands of hectares in northern Nganjuk. Therefore, the Agricultural Research and Development Agency of the Ministry of Agriculture (Balitbangtan) carries out agricultural innovations to overcome these problems.

According to data from the Central Statistics Agency in 2015, East Java occupies the top position as the largest rice producer in Indonesia. In 2015, East Java was able to contribute greatly to the national rice production of 70.8 million tons of GKG (Milled Dry Rice). Along with the rapid pace of infrastructure development in East Java and the largest rice production, East Java has the potential to become a center for the development of agricultural innovations for rice cultivation in dry land. Several areas in East Java are superior in rice production, one of which is Nganjuk Regency. According to BPS data, out of 79 total districts/cities in East Java, Nganjuk is ranked 8th as the largest producer of rice commodities in East Java.

Farmers in Nganjuk Regency, especially in Jatigreges Village, Pace Subdistrict, have an average age of 45 to 65 years. Which requires a special strategy to socialize the innovation of rice cultivation in dry land to farmers. The dissemination of this agricultural innovation is a form of real development communication. This study selected farmer groups located in Jatigreges Village, Pace District, Nganjuk Regency. According to several agricultural extension staff in Pace District, this farmer group in Jatigreges village is the most active among other farmer groups in Pace District. This activity can be seen in several outreach events by Agricultural Extension Officers.

However, in the process there are obstacles such as the fact of age. Age factors that cause the inability to use new technology, language factors such as new terms used in extension, cultural differences for example not accepting new agricultural innovations...
because they are used to their old ways, to the distrust of farmer group members to agricultural extension workers. Obstacles like the above can certainly be resolved if there is effective communication between PPL and farmers. Communication can be effective if the message is received and understood as intended by the sender of the message, the message is followed up with an action by the recipient of the message and there are no obstacles to it (Rokhmah, 2017). According to Wilbur Schramm in his book “The Process an Effect of Mass Communications” the message is made in such a way and always attracts attention and the message is a need that can be fulfilled according to the situation and conditions of the communicant (Rinawati, 2006).

According to Effendy, socialization is the provision of various sources of knowledge that allow people to behave and act as effective members of society and are aware of their social functions, so that they can be active in society (Herdiana, 2018). The essence of socialization is the process of learning to the community about something that is not yet known to be accepted and implemented properly. This process can last a certain time because it is determined by the social, economic, and cultural environment. In order for the socialization to be effective, an effective communication strategy is needed by Field Agricultural Extension Officers in Jatigreges village. (Effendy, 2009: 31). In this study, the PPL communication strategy in this socialization program will be analyzed using the Hafied Cangara Five Steps method. The steps in this method are Research (Research), Planning (Planning), Implementation (Execute), Measurement (Measure), and Reporting (Report).

Based on the background of the problem and the formulation of the problem above, the researcher has a goal in this study, namely to determine the communication strategy of Field Agricultural Extension in disseminating agricultural innovations for rice cultivation in dry land to farmer groups in Jatigreges Village, Pace District, Nganjuk Regency

2. RESEARCH METHOD

The method used in this study is a qualitative method with a descriptive approach. The descriptive qualitative research method in this study aims to describe or describe qualitatively the communication strategy of Field Agricultural Extension in disseminating agricultural innovations in dry land rice cultivation to farmer groups. Qualitative methods are used because 1) adapting qualitative methods is easier when dealing with multiple realities, 2) this method presents directly the nature of the relationship between researchers and respondents, 3) this method is more sensitive and more adaptable to many sharpening of mutual influences and patterns of behavior. -the pattern of values encountered (Moleong, 2004: 5). This primary data can be obtained directly from interviews and observations first conducted by researchers. In this study, the technique used to collect informants is a purposive sampling technique. Purposive sampling is a sampling technique with certain considerations. In the process of collecting informants,
the researchers divided the informants into two categories, namely Agricultural Extension Officers and Farmers. The criteria are as follows:

a) For Field Agricultural Extension
   1. As an active staff at the Pace District Agricultural Extension Center
   2. Involved in the socialization program for rice cultivation innovation in dry land
   3. Socialization program communicator

b) For Farmers
   1. Registered as a member of a farmer group in Jatigreges Village
   2. Follow the socialization conducted by PPL
   3. Have dry land

3. RESULTS AND DISCUSSION

This study chose Field Agricultural Extension as the object of research in the Nganjuk Regency area, especially in the Jatigreges Village area, Pace District. The selection of this object is because Field Agricultural Extension is the main element in the implementation of extension tasks at the Agricultural Extension Center level which is tasked with providing technical guidance on extension programs to farmer groups. The communication process of Field Agricultural Extension in the socialization of rice cultivation in dry land to farmer groups in Jatigreges Village requires the right strategy so that PPL’s goals in realizing increased productivity, business efficiency, income, and farmers’ welfare are achieved through the extension program. The identities of the informants interviewed in this study are as follows:

Table 1 Identity of Informants

<table>
<thead>
<tr>
<th>No. Informan</th>
<th>Name</th>
<th>Job</th>
<th>Jabatan</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Taman</td>
<td>Field Agricultural Extender</td>
<td>Head of BPP Pace District Branch</td>
</tr>
<tr>
<td>2</td>
<td>Nikmatul</td>
<td>Field Agricultural Extender</td>
<td>Staff of BPP for the Assisted Area of Jatigreges Village</td>
</tr>
<tr>
<td>3</td>
<td>Sumiatun</td>
<td>Staff of BPP for the Assisted Area of Jatigreges Village</td>
<td>Staff of BPP for the Assisted Area of Jatigreges Village</td>
</tr>
<tr>
<td>4</td>
<td>Jumungin</td>
<td>Farmer</td>
<td>Members of the Jurang Jero Farmers Group, Jatigreges Village</td>
</tr>
<tr>
<td>5</td>
<td>Nyoto</td>
<td>Farmer</td>
<td>Member of Farmers Group Tani Sumber Tani Jatigreges Village</td>
</tr>
</tbody>
</table>
A. Communication Strategy Implemented by Field Agricultural Extension Officers in Disseminating Rice Cultivation Agricultural Innovations in Dry Land

The researcher uses Hafied Cangara's Five-Step Theory in analyzing the communication strategy that has been implemented by the Field Agricultural Extension Officer. In the socialization of agricultural innovations for rice cultivation in dry land to farmer groups in Jatigreges village by reviewing the theory, it can be described as follows:

a.) Research

Prior to conducting counseling, Field Agricultural Extension Officers conduct research or observations first to find out what problems are being experienced by farmers or problems experienced by the Agriculture Service. Field Agricultural Instructors cannot give any program to farmers, because if the farmers are not suitable, it will hinder the success of the program being carried out. After PPL made observations, they looked for potential that could be developed.

Jatigreges Village was selected as an area that has the potential to carry out an agricultural innovation program for rice cultivation in dry land. This is because the dry land area in Jatigreges village reaches 3,785 m² or the largest compared to other villages in Pace District or even throughout Nganjuk Regency. This potential will not be wasted by PPL to support the rice cultivation program in dry land. Another factor according to PPLs behind this program is the depletion of productive agricultural land or paddy fields which affects the national main food security in the form of rice

b.) Planning (Planning)

In planning communication programs including socialization or counseling, the main things to do are about how to select or determine sources (communicators), set targets and analyze audience needs, compose messages, and choose media or communication channels. The first planning in implementing the socialization program for rice cultivation innovation in dry land is to determine the communicator, which is the task of the BPP Staff of the Jatigreges Village Assisted Area. This was conveyed by informant 1, Mr. Taman as follows, “Yes, so the PPL who did the counseling was chosen. The counseling is the PPL who already has responsibilities in the area...”.

The selection of communicators in the socialization of agricultural innovation programs for rice cultivation in dry land is based on the closeness between communicators and farmers as communicants. This is because in addition to requiring high credibility (as PPL), a communicator will succeed in communication through the mechanism of attraction if the communicant feels there is a similarity and closeness between the communicator and him so that the communicant is willing to obey the content of the message launched by the communicator.

The next step in the communication strategy planning process carried out by the Field Agricultural Extension Officer is to set targets (segmentation) followed by an analysis of the needs of the audience. From the explanations of informants 1, 2, and 3, it can be concluded that the target of the socialization of the innovation program for rice cultivation in dry land is of course the farmers who have dry land or dry land in Jatigreges Village.

After the stage of setting targets and analyzing the needs of the audience, the next step taken by PPL is to compose a message, which is to determine the theme and material to be studied. According to Wijaya (2015), the message is everything that is conveyed by someone in the form of a symbol that is perceived and accepted by the audience in a series of meanings (Rahayuningtyas, 2017). Determining the
message material is very important to be arranged systematically and clearly, because not all farmers have the same ability to receive or understand the information conveyed by the communicator.

The arrangement of messages or materials in the rice cultivation program in dry land is arranged in an interesting way, because it is a new program that is being socialized and the target audience is farmers with low education and old age. Messages are arranged using Javanese language, which is more dominant than Indonesian. This is because many farmers are not fluent in Indonesian.

PPL makes what is called LPM, namely the Extension Preparation Sheet. The contents of the LPM are the material to be delivered, the problems experienced by farmers and their solutions. Submission of material is made more dense, concise, and interesting. The function of the preparation of the material is to anticipate the saturation of the audience. Thus, it is hoped that the message conveyed can be well received and obtain optimal results. This is the same as stated by Wijaya (2015), a message that is packaged beautifully, then offered with the power of persuasion, the communicant will be interested in having ideas (Rahayuningtyas, 2017).

The planning of the next communication strategy carried out by the Field Agricultural Extension is to choose the media or communication channel. Through several media used in program activities, it is hoped that the success of the program can be achieved. In order to run smoothly, media preparation must be done selectively and adapted to the conditions of the audience.

Informant 3 (PPL): “The media we use usually speak directly to farmer groups. So we like to explain how this program is, what its benefits are, and what conditions are farmers in whether it is possible to carry out this program. For distribution, we also make leaflets, which we give to farmers so they can study at home. The forms of communication media used can be divided into two types which include group communication and mass communication. According to Informant 1, Field Agricultural Instructors more often use media or group communication channels. So whatever the program, the presentation of the material tends to be delivered manually or directly through meetings, socialization or counseling to farmer groups. This is because it adjusts to the level of farmers’ ability to understand a material.

The Field Agricultural Instructor used several media to succeed in the socialization program of agricultural innovations for rice cultivation in dry land to this farmer group in Jatigreges Village. The media is divided into two types of communication channels, namely group communication channels and mass communication. Through group communication, PPL conducts socialization directly or face-to-face, more dominantly carried out on land or as practical material. It aims to make it easier for farmers with low education and relatively old age to understand the extension material.

c.) Execution

The third step taken by the Field Agricultural Extension in the socialization of rice cultivation in dry land is to carry out or execute. It is said to be execution because in this step, PPL carries out the implementation of all communication program planning. PPL coordinates with the head of the farmer group and member representatives to determine the extension schedule. As stated by informant 1, Mr. Taman as follows: “We coordinated with the head of the farmer group first, we explained that there was a program to increase production in dry land which was previously only planted with palawija, it would be better if the development of the commodity was added to rice
plants. That is the first to coordinate with the head of the farmer group and its management."

At the implementation stage, PPL uses three different methods of socialization. The first is indoor counseling, followed by demonstration plot counseling, and the last one is taking a personal approach to farmers who do not understand the extension material. Informant 4 (Farmers): “Suluhane croaked the gathering of ngunu kui, lungguh klosoan, manganese snacks, ngunjuk wedang. Come on, lek cangkruk, Mas. Yo PPL spoke clearly, I was listening…” (The counseling is like a social gathering, sitting on a mat, eating snacks, drinking wedang. Like you when you hang out, Mas. The PPL talks to explain, I just listen).

According to informants 1 and 3, there were technical changes in indoor socialization during the COVID-19 pandemic. The most significant change is that the maximum number of participants is only 25 farmers, even though the number of farmers who have dry land is 127 farmers. So that the farmers who attended the socialization were only one-fifth of the total number of targets. This makes PPL hold this indoor counseling four times until February 2021.

The next implementation strategy carried out by the Field Agricultural Extension is to conduct demonstration plots. Demonstration plots or demonstration plots are supporters of indoor socialization or extension so that farmers adopt innovations more quickly. This means that farmers are less interested if the results or evidence are not shown directly. The demonstration plot of the rice cultivation system in dry land was carried out on the land owned by the head of the farmer group with an area of 20 m². This demonstration plot system starts from the management of the Tegal land, which is converted into a rice field so that it can be planted with rice. After that, planting rice seeds and then continuing with the use of fertilizers. Then wait until the rice grows until it is suitable for harvesting.

The implementation strategy is to hold demonstration plots as an alternative that can be applied to overcome various problems in the agricultural sector. The problem is that information about new technologies and innovations has not yet reached the farmers or farmers still doubt the innovation technology. Farmers need real examples of a technological innovation program. Therefore, it is very important to procure demonstration plots. So that farmers are interested in adopting agricultural innovations for rice cultivation in dry land in their farming business.

If there are obstacles in the form of refusal or doubt from farmers to adopt this program, then PPL must carry out follow-up activities from the socialization, namely taking a personal approach to the farmers. This personal approach activity can be seen from the results of interviews with some of the following informants: Informant 1 (PPL) “We have to be patient and painstaking and often go to the farmers who are not sure, one by one. Always motivate them to believe and convey the new knowledge. Indeed, changing attitudes and behavior is indeed difficult, it takes time. PPL is meant to change attitudes, behavior, and skills...”. This personal approach can be done by approaching the farmer, his wife, and their children. This approach can be done by frequently chatting or discussing and meeting with farmers, inviting them to eat, visiting their homes to get closer to their children and wife. This is done so that farmers can easily understand and believe what is conveyed by PPL.
d.) Measurement (Measure)

Furthermore, the communication strategy carried out by the Field Agricultural Extension is to take measurements. This is done to find out the final results of the activities that have been carried out. This measurement activity includes pre-test, post-test, and adopter checking. According to informants 1 and 3, this pre-test was conducted before the socialization stage. This activity is carried out when coordinating with farmer groups to determine the schedule. So at the time of the pre-test, farmers did not know all things related to the rice cultivation program in dry land. The form of this pre-test activity according to informants 2, 4, and 5 is to do simple questions. The question contains material about the rice cultivation program in dry land.

The post-test activity was carried out after the farmers participated in the entire series of socialization programs for agricultural innovations in rice cultivation in dry land. In this post-test, farmers are given the same questions as the pre-test. According to informant 1, the results of the post-test conducted after the rice cultivation program answered an average of 60% of the truth level. According to him, the results are already quite good if the questions discuss new innovation programs for farmers.

Another measurement activity carried out by Field Agricultural Extension is to check adopters. Adopter checking is an activity carried out by PPL by following up on the development of adopters of the rice cultivation program in dry land. This activity is carried out in collaboration with the head of the farmer group. The PPLs check every two weeks, so every two weeks they have to receive a report of the adoption of the program.

e.) Reporting (Report)

After measuring the level of understanding of farmers through pre-test and post-test as well as checking adopters, the Field Agricultural Extension will report. Reporting is the process of making a written report regarding the activities of the innovation program for rice cultivation in dry land. The preparation of this report serves as an evaluation material. The reports made by the Field Agricultural Extension Officers are divided into two types, namely Activity Reports and Program Reports. The activity report contains an explanation or explanation of the rice cultivation program in dry land which includes the form of the program, the number of participants present, the level of enthusiasm of the participants, and the success of the socialization activities. The report was made after the dissemination of innovations for rice cultivation in dry land was carried out to be immediately sent to the District Agriculture Office.

Meanwhile, the program report contains the same as the activity report, but there are additional points such as farmer problems and their solutions, explanations of program results, and new strategies for counseling the results of the evaluation. This activity report is made every six months because it is waiting for the results of the rice cultivation program in the dry land.
B. The Relation of Innovation Diffusion Theory to Communication Strategy of Field Agricultural Extension in Disseminating Rice Cultivation Innovations in Dry Land

The theory of diffusion of innovation is very influential on the communication strategy of Field Agricultural Extension Officers in disseminating innovations in rice cultivation in dry land to farmer groups in Jatigreges Village. Therefore, the role of the implementation of the theory of diffusion of innovation is very influential in the agricultural innovation program for rice cultivation in dry land to farmer groups in Jatigreges Village. The following are five indicators of the relevance of the theory of diffusion of innovation to the communication strategy used by Field Agricultural Extension Officers in the socialization of rice cultivation in dry land:

a.) Uses (Advantages)

The innovation program for rice cultivation in dry land is quite profitable for farmers. Because before this program, farmers who had dry land planted their land with secondary crops which of course had a much cheaper market price than rice. While the benefits for agricultural institutions, this program helps anticipate limited food stocks, especially rice. The rice cultivation program in dry land also makes agricultural institutions profitable, because food security becomes stable which can reduce rice imports.

b.) Compatibility

The innovation program for rice cultivation in dry land matches the regional potential of Jatigreges Village. Meanwhile, informants 2, 3, and 4 explained that this program is suitable for farmers' problems. The problem is none other than that many farmers complain that if their dry land is planted with secondary crops, then the results with the capital spent are not comparable because the price of secondary crops is cheap. So with the rice cultivation program in dry land, the farmers' problems can be solved.

c.) Complexity

PPL carries out several activities to convince farmers such as holding demonstration plots and making personal approaches to farmers so that they are willing to adopt the innovation. The percentage of adopters of 89.7% indicates the level of complexity of the innovation of rice cultivation in this dry land is low. So that farmers can adopt the innovation even though it requires further communication efforts from PPL.

d.) Trial (Triability)

In the implementation of the plotting demonstration, farmers can see how the rice cultivation program in dry land is carried out because they directly see the technical program from the beginning to harvest. This demonstration plot system was tested on dry land by the head of the farmer group, so that other farmers could see how to manage the land, how to take care of seeds to grow, fertilize until harvesting.

e.) Observability

Farmers can make observations first before adopting an innovation program for rice cultivation in dry land. This observation was carried out by observing other farmers who had adopted earlier (early adopters). One of the farmers that the researchers interviewed was interested in adopting after seeing the rice planted by other farmers on their dry land thrive. Seeing that other farmers' rice planted in dry land is thriving, he is interested in adopting the program because it is certain that it will be a late adopter.
4. CONCLUSION

Based on the results of the data analysis and discussion above, the researchers were finally able to draw conclusions from the research on the Communication Strategy of Field Agricultural Extension in Disseminating Agricultural Innovations for Rice Cultivation in Dry Land to Farmers' Groups in Jatigreges Village, Pace District, Nganjuk Regency as follows:

• The results obtained from the field show that the strategies adopted by the Field Agricultural Extension Officers can be analyzed using Hafied Cangara's Five Steps communication strategy theory. There are five stages of communication strategy implemented by Field Agricultural Extension, namely research, planning, implementation, measurement, and reporting.

• The communication strategy implemented by PPL was considered successful because as many as 89.7% of the targets adopted the innovation program for rice cultivation in dry land. This is because an innovation program contains important points from the theory of diffusion of innovation, namely usability, suitability, complexity, testability, and observability. The advantages of this innovation are increasing farmers' income and stabilizing national food security. The compatibility of this innovation program is in accordance with the needs of farmers, namely they want an innovation so that dry land management is effective. The complexity of this innovation is low, because farmers who are able to adopt this program reach 89.7%. The cultivation program can also be tested (triability) by farmers through the demonstration plotting method. Then farmers can also observe (observability) other farmers who have previously adopted this innovation so that they can find out the advantages of this program.

5. SUGGESTIONS

Researchers suggest that all ranks of Field Agricultural Extension in Pace District to maintain or even modify the communication strategy used in this program as a reference so that it can be used to implement the next agricultural technology innovation program. For further research that will discuss similar problems, it is better to add farmer informants with pro, con, and neutral categories of farmers because they are useful for diversity and strengthening data

REFERENCES


**Dokumen Pemerintah:**