



## ADOPTION OF FARMERS' INNOVATION IN THE DEVELOPMENT OF ONION BUSINESS IN KAYU LOE VILLAGE, BANTAENG DISTRICT, BANTAENG REGENCY

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### Abstract

*The purpose of this study was to find out how the level of adoption of farmer innovation in the development of onion farming is and how the behavior changes of farmers on the application of innovation in onion cultivation in Kayu Loe Village, Bantaeng District, Bantaeng Regency. This research was conducted in Kayu Loe Village, Bantaeng District, Bantaeng Regency using a simple random sampling technique with 42 respondents. The data analysis technique used is quantitative and qualitative descriptive analysis using a rating scale. The results showed that the adoption stage of agricultural extension on shallot cultivation in Kayu Loe Village from the interest stage was 2.13%, tried 2.28 and received 2.18 was included in the medium category because farmers did not adopt new things conveyed by the extension workers, where the three results are less encouraging or motivating to increase the production of shallots in the village. While the awareness stage is 2.44 and the assessment stage is 2.41, it is included in the high category because farmers have adopted the things that have been conveyed by the agricultural instructor. Where when delivering information about the development of shallot farming, extension workers apply shallot agricultural production to the community so that farmers are motivated in the use of new shallot planting ideas. Changes in knowledge of farmers are classified as moderate category because farmers do not know what innovation adoption of onion planting is and farmers also rarely participate in counseling about onion planting innovations.*

*Keywords: Adoption of Innovation, counseling, behavior*

### 1. Introduction

Shallots (*Allium ascalonicum* L) are a type of vegetable that has many benefits and has high economic value. The demand for fresh shallots for household consumption and raw materials for the domestic processing industry continues to increase every year in line with the development of the population and the growth of the food industry. Therefore, the production of quality shallots must be increased and produced throughout the year so that the supply is available and the price does not fluctuate (Manongko et al, 2017).

Shallots have become a concern of the government in developing new onion centers in dry land, where efforts to develop commodities are expected to be able to overcome the supply of domestic shallot production throughout the year. In addition, onions will be able to overcome the shortage of shallot supply which often causes very sharp fluctuations in the price of shallots and burdens the community. Cultivation of shallots in dry land is a technological breakthrough to improve farmers' welfare, because shallot farming in paddy fields during the rainy season is considered inefficient and unprofitable. Influencing the level of farmer decision-making on an innovation, namely shallot cultivation (Caroline et al. 2017).

Mardikanto stated that the role of agricultural extension agents as "agents of change" has a dual task, namely conveying information and at the same time trying to change the behavior of the target community to be able to participate in development. In order to carry out this dual role, an agricultural instructor must prepare himself carefully, namely by increasing knowledge, skills, skills and improving attitudes.

Agricultural extension is an agent for changing farmers' behavior by encouraging farmers to change their behavior to become farmers with better abilities and able to make their own decisions, which in turn will get a better life. Kartasapoetra, (1994) in Timbulus (2016).

For agricultural extension workers, the changes that occur in the development of agricultural science and technology, the level of farmers' abilities and environmental changes that affect farming must really be mastered. Therefore, with a change in knowledge about this change, agricultural extension workers can take work steps so that farmers can consciously accept what is recommended.

Agricultural extension activities are aimed at achieving changes in the behavior of farmers and their communities covering aspects of both economic, socio-cultural, political and religious, for that the development provided must be able to encourage changes that have the nature of renewal, which is often called "Innovation", briefly innovation means new ideas, ideas, practices. So that overall it can be interpreted as an idea, product, information technology, institution, behavior, values, and new practices that are not yet widely known, accepted, and used by the majority of the community in a certain location, which can encourage change. -Changes in all aspects of people's lives.

From the description above, the aim of the extension agent is to change the behavior of farmers through increasing the knowledge, attitudes, skills and motivation of the target farmers so that farmers are able to make decisions in running and developing their farming independently. Through the role of extension agents as agents of change, farmers are expected to be aware of their needs, improve their abilities, and be able to play a better role in society.

Adoption in the extension process (agriculture), can essentially be interpreted as a process of accepting innovation and/or behavior change, both in the form of knowledge (cognitive), attitude (affective), and skills (psychomotor) in a person after receiving innovations delivered by extension workers by the community. the target. Acceptance here means not just knowing, but actually being able to implement or apply it correctly and live it in life and farming. Acceptance of these innovations, can usually be observed directly or indirectly by others, as a reflection of changes in attitudes, knowledge, and skills (Mardikanto, 1993).

Bantaeng Regency is one of the regencies that is very good for horticultural agricultural land in South Sulawesi, for example vegetable commodities (shallots). But there is one village in Bantaeng Regency, namely in Kayu Loe Village, Bantaeng District, Bantaeng Regency, some farmers are still not aware of how to use their agricultural land. So that most of the farming community in Kayu Loe Village are looking for income in the city even though the land they have is quite large, with agricultural extension to apply new ideas about developing shallot farming, the vacant land can be used for planting shallots. however, the efforts of the farmers are less interested in attending the Extension on the Adoption of Innovation for Shallot Cultivation carried out by the field agricultural extension workers who apply it according to the cultivation of shallots. So that most shallot farmers plant according to their own habits, followed by other shallot farmers, as well as management issues which are also classified as still lacking and greatly affect the lack of maximum shallot production increase.

Therefore, the researcher considers it necessary to conduct research on the Analysis of Innovation Adoption in the Development of Shallot Farming in Bantaeng District, Bantaeng Regency so that in the future it can develop about shallot cultivation.

## 2. Methods

### 2.1 Research Location and Time

The location selection was done intentionally, namely based on certain considerations adapted to the research objectives. This research will be carried out in Kayu Loe Village, Bantaeng District, Bantaeng Regency, this research will be carried out from May to June 2022

### 2.2 Sampling Technique

Determination of respondents is done by using the simple random sampling method (simple random), the number of samples taken was 10% of the total farmer population, so that 42 samples were selected as respondents. This is in accordance with the opinion of Suharsimi Arikunto (2002) which states that the number of samples can be selected as much as 10% - 15% or 20% - 25% which can represent the farmer population.

### 2.3 Data Types and Sources

There are two types of data in general, namely quantitative data and qualitative data which will be explained below, the authors focus more on qualitative data in conducting this analysis.

### 2.4 Data collection technique

Data collection techniques are a step that must be used in conducting a study, in order to obtain data in accordance with what is desired. The data collection techniques used in this study were observation, interviews, documentation and questionnaires.

### 2.5 Data analysis technique

The data analysis carried out is descriptive analysis using quantitative and qualitative data originating from the application of extension methods to shallot farmers in Kayu Loe Village, Bantaeng District, Bantaeng Regency. (Sanggarimbu and Effendi, 2006) with the following conditions:

Formula:  $\frac{\text{Highest Value} - \text{Lowest Value}}{\text{Number of Respondents}}$

1. Tall : 3
2. Currently : 2
3. Low : 1

By measurement category, namely:

1. Low if the average score is 1.00 - 1.66
2. Medium if the average score > 1.67 – 2.32
3. High if the average value > 2.33 – 3.00

## 3. Results and Discussion

### 3.1 Shallot Farmer Adoption Stage

The process of planting shallots carried out by farmers in increasing their production is still traditional. In this way, farmers find it easier to plant shallots, because it is not so difficult. In this adoption we can find out the level of knowledge of farmers in the development of shallots through several stages:

#### a. Consciousness Stage

Table 1 below explains that the adoption of farmers in the development of shallots in Kayu Loe Village, from the awareness of farmers about new ideas on how to plant shallots is very useful for increasing agricultural production yields, based on a research survey conducted using the scoring method, the average results are obtained. average with a value

of 2.29 belonging to the medium category. It is said to be moderate because farmers say that the new ideas conveyed by the extension workers do not necessarily benefit the community from onion farming.

Farmers' awareness about agricultural potential in Kayu Loe Village is very supportive about planting shallots and it can be seen that based on a research survey conducted using the scoring method, the average result is 2.79 classified as high category. Because the statement submitted by a respondent named Dg kammisi stated that the location in Kayu Loe Village is very supportive and can be used as agricultural land for shallots, therefore it can be classified as high.

Farmers' awareness of the strengths and weaknesses of the shallot planting process in Kayu Loe Village is based on a survey conducted during the research using the scoring method, the average result is 2.24 classified as moderate category. This is said to be moderate because according to one respondent said that the problems faced with planting shallots are sometimes insurmountable and cannot be overcome, for example, the incidence of pests and diseases of shallots is sometimes insurmountable and sometimes can be overcome.

**Table 1. Awareness of Shallot Farmers in Kayu Loe Village, Bantaeng District, Bantaeng Regency.**

No	Activity	Average	Category
1	Awareness of new ideas on how to plant shallots is very useful for increasing farmers' production yields.	2.29	Currently
2	Farmers' awareness of agricultural potential is very supportive of onion planting.	2.79	Tall
3	Awareness of the advantages and disadvantages of the onion planting process.	2.24	Currently

Source: Processed primary data, 2022

### **b. Interest Stage**

Based on table 2 below, the interest of farmers to obtain information through extension workers and the community about ideas for planting shallots in Kayu Loe Village can be seen based on a research survey using the scoring method, the average result is 2.31 in the medium category. It is said to be in the medium category because according to one respondent that he does not agree that he can get information from agricultural extensions because farmers are less interested in attending activities carried out by agricultural extension workers.

The adoption rate of shallot planting at the stage of farmers' interest in knowing new things about onion planting based on a research survey obtained an average result of 2.26 belonging to the medium category. This is because farmers are still hesitant to apply new things they know.

Meanwhile, farmers' interest in finding out about extension activities about shallots based on a research survey obtained an average result of 1.81 in the low category. Because according to the respondent, he does not often participate in agricultural extension activities regarding the application of onion planting.

**Table 2. Interests of Shallot Farmers in Kayu Loe Village, Bantaeng District, Bantaeng Regency**

No	Activity	Average	Category
1	Farmers' interest in obtaining information through extension and community	2.31	Currently
2	Farmers' interest in knowing new things about planting shallots	2.26	Currently
3	Farmers' interest in finding out about extension activities about shallots	1.81	Low

### **c. Assessment Stage**

Based on table 3 below, the assessment of agricultural extension activities on how to plant shallots in Kayu Loe Village can be seen based on the survey obtained an average result of 2.86 belonging to the high category. Because according to respondents, the existence of agricultural extension activities can help farmers in the problem of planting shallots so as to provide good results.

From the results of research conducted on the willingness of farmers to accept the things conveyed by extension workers about onion planting, the average value of 2.33 is classified as high so it can be said that not all farmers who do not want to consider this, there are also farmers who want to consider the problem of planting shallots, because according to them, new things can help farmers in increasing production yields and the process of planting shallots. However, there are also farmers who are less willing to consider the problem of planting shallots, this is because farmers are afraid of new things that can thwart the onion process that they are currently doing.

Meanwhile, judging from the positive things obtained from the shallot agricultural extension, the average yield of 2.26 was categorized as moderate because according to the respondents sometimes what was conveyed by the extension worker could be applied and sometimes it could not be applied.

**Table 3.** Assessment of Shallot Farmers in Kayu Loe Village, Bantaeng District, Bantaeng Regency.

No	Activities	Average	Category
1	Assessment of agricultural extension activities on how to plant shallots.	2.86	Tall
2	The willingness of farmers to accept the things conveyed by the extension worker about onion planting	2.33	Tall
3	Willingness to deliver about onion planting	2.05	Currently

#### d. Trying Stage

Based on table 4 below, the assessment for the criteria for farmers to try new ideas for planting shallots submitted by agricultural extension workers in Kayu Loe Village obtained an average yield of 2.40 which was classified as high category. Because farmers are getting interested in what the extension workers have to say about how to plant shallots.

Judging from the willingness of farmers to try new things in onion planting that has been determined by the agricultural extension, the average yield of 2.17 is in the medium category because according to one respondent he said he was not interested in what was conveyed by the extension worker because it was not necessarily what was conveyed. by extension workers can be profitable for farmers.

Meanwhile, judging from the positive things obtained from the shallot agricultural extension workers, the average yield of 2.26 was categorized as moderate because according to the respondents, the onion planting applied by the extension workers to farmers was uncertain, because farmers were afraid of the resulting production. will decrease.

**Table 4.** Farmers' Responses to the Trial Stage in Kayu Loe Village, Bantaeng District, Bantaeng Regency

No	Activity	Average	Category
1	The interest of farmers to try new ideas for planting shallots conveyed by agricultural extension workers.	2.40	Tall
2	Willingness to try new ways of planting shallots that have been applied by agricultural extension workers	2.17	Currently
3	Positive things obtained from onion farming counseling	2.26	Currently

### e. Receiving Stage

Based on table 5 above, the willingness of farmers to apply new things that have been conveyed by agricultural extension workers in Kayu Loe Village obtained an average result of 2.00 which is categorized as moderate because according to respondents, farmers prefer to try what they know for themselves.

The success for the implementation of onion planting from what has been conveyed by the extension worker obtained an average result of 2.17 belonging to the medium category because farmers in implementing the new things conveyed by the extension worker did not apply it because respondents said that farmers used things that were more common. they know for themselves.

Meanwhile, the increase in results obtained from the application of onion planting obtained an average result of 2.21 which was categorized as moderate because according to the respondent it was not good because he only relied on things he knew himself.

**Table 5.** Farmers' Responses to the Receiving Stage in Kayu Loe Village, Bantaeng District, Bantaeng Regency

No	Activity	Average	Category
1	Willingness to apply new things that have been conveyed by agricultural extension workers	2.00	Currently
2	Success for the application of onion planting	2.17	Currently
3	Increased yields obtained from the application of onion planting	2.21	Currently

Judging from the results of the research that has been carried out on the adoption of shallot farmers in Kayu Loe Village, Bantaeng District, Bantaeng Regency, it can be seen the comparison of the adoption stages in table 6 below

Based on the results of the study below, the adoption stage of agricultural extension on shallot cultivation in Kayu Loe Village from the interest stage of 2.13, trying 2.28 and receiving 2.18 was included in the medium category because farmers did not adopt new things conveyed by the extension workers. , where the three results did not encourage or motivate to increase the production of shallots in the village.

While the awareness stage is 2.44 and the assessment stage is 2.41 included in the high category because farmers have adopted the things that have been conveyed by the agricultural instructor. Where when conveying information about the development of shallot farming, extension workers apply shallot agricultural production to the community so that farmers are motivated in using new shallot planting ideas.

The average value of the comparison of the stages of innovation adoption in Kayu Loe Village, Bantaeng District, Bantaeng Regency has an average value of 2.29 belonging to the medium category because the role of extension workers in this discussion activity is smaller. The presence of extension workers is more as a facilitator or resource person. Meanwhile, the adoption stage is intended to show, show or highlight something with the intention of attracting the attention of the target or the person who sees it.

The speed of the adoption process is not the same for everyone, on the one hand there are very fast but on the other hand there are people who need a long time to adopt an innovation (Marzuki, 1999 in Yenni 2010).

**Table 6.** Comparison of Adoption Stages in Kayu Loe Village, Bantaeng District, Bantaeng Regency

No	Stage	Average	Category
1	Awareness	2.44	Tall
2	Interest	2.13	Currently
3	Evaluation	2.41	Tall
4	Try	2.28	Currently
5	Accept	2.18	Currently
	Average	2.29	Currently

### 3.2 Changes in Farmer Behavior on Application of Innovation in Cultivation Shallots in Kayu Loe Village

The level of effectiveness or success in disseminating innovation is strongly influenced by the use of communication channels. Through the use of interpersonal channels and mass media as sources of information, it is hoped that social changes will occur as a result of the adoption of innovations that will have an impact on behavioral changes in farmers which include changes in knowledge (cognitive) and changes in attitudes (affective).

#### a. Changes in Farmers' Knowledge of the Adoption of Shallot Cultivation Innovations

Table 7. Level of Change in Farmer Knowledge Regarding the Adoption of Shallot Cultivation Innovations

No	Activity	Average	Category
1	Knowing about the adoption of onion planting innovation counseling	2.31	Currently
2	Have you ever attended counseling about the adoption of onion planting innovations?	1.81	Currently
3	Applying or doing things that have been explained by the instructor about onion cultivation	1.79	Currently
4	The information that has been given by the extension worker about the adoption of innovation in onion planting is acceptable	2.17	Currently
Average		2.02	Currently

Based on table 7 above, the level of change in farmer knowledge regarding the adoption of onion planting innovation counseling obtained an average yield of 2.31 in the medium category, because some farming communities are still not aware of the adoption of shallot planting innovations. this happened because the farming community rarely attended counseling about the adoption of innovations regarding onion planting carried out by field agricultural extension workers who obtained an average score of 1.81 belonging to the medium category.

Meanwhile, the change in farmer's knowledge on the application of shallot growers scored 1.79 in the medium category. According to one respondent, he was hesitant to implement new things because farmers were not familiar with the new ideas presented by extension workers and they preferred to plant shallots according to their habits. Meanwhile, to adopt innovations submitted by farmer extension workers, they still have not accepted, because according to one respondent, some farmers are not sure that they will succeed when implementing these new ideas and the lack of information obtained by farmers causes farmers to still doubt about innovations/new ideas regarding planting shallots delivered by field agricultural extension workers.

#### b. Changes in Farmers' Attitudes towards the Adoption of Shallot Cultivation Innovations

Table 8. Changes in Farmers' Attitudes Regarding Adoption of Shallot Cultivation Innovations

No	Activity	Average	Category
1	Changes in the mindset of farmers about innovation regarding onion planting	2.50	Tall
2	Farmers agree on innovation as a means of cultivating shallots	2.33	Tall
3	Adoption of onion planting innovations can increase onion production	1.95	Currently
4	Making changes in terms of onion planting	1.95	Currently
Average		2.18	Currently

Based on table 8 above, we can see that the level of change in farmers' attitudes regarding changes in mindsets for onion planting innovations has an average value of 2.50 which is classified as high because according to one respondent, with this innovation, it can change his mindset which used to be. he did the planting of shallots according to his habit but now he has started to implement the new things presented by the agricultural extension workers. Then some respondents also agreed that there would be innovation as a means of cultivating shallots because according to one respondent, innovation could make it easier for farmers to plant shallots.

Meanwhile, the adoption of innovation can increase the production of shallots, obtaining an average value of 1.95 in the medium category. And in terms of changes in farmers' attitudes in terms of making changes to onion planting, the average value of 1.95 was in the medium category because according to one respondent that some farmers had started to make changes in terms of planting shallots and some farmers were still hesitant to do so. changes with the reason that they are afraid of failure in planting shallots and they are afraid to try new things that are conveyed by field agricultural extension workers.

#### 4. Conclusion

Based on the results of research in the village of Kayu loe, the following conclusions are drawn:

- a. The level of adoption stage reached by farmers is awareness, interest, judgment, try and accept. Where the interest stage gets an average value of 2.13, the interest stage is 2.13, the trying stage is 2.41, the trying stage is 2.28 and the receiving stage is 2.18 including the medium category because farmers still pay less attention to new information or ideas conveyed by agricultural extension workers. While the awareness stage is 2.44 and the assessment stage is 2.41, it is in the high category because farmers pay attention to new things conveyed by extension workers about the use of new ideas regarding onion planting.
- b. Changes in the behavior of farmers in Desa Kayu Loe
  - a) Changes in knowledge of farmers are classified as moderate category because farmers do not know what innovation adoption of onion planting is and farmers also rarely participate in counseling about adoption of onion planting innovations.
  - b) Changes in attitude of farmers are classified as moderate category because some farmers cannot change their mindset and behavior / habits so that farmers have not implemented the new ideas presented by field agricultural extension workers.

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