# Perspective of Rice Farmers Agricultural Extension Services

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### **ABSTRACT**

Agriculture is an important sector for many rural people. Agriculture has become the main daily livelihood and has many cultural dimensions that live in society. The dynamics of natural farmers developing their businesses are very directly related to the role of extension workers. This study aims to determine the quality of rice farmer extension services in Balung sub-district using the Servqual (Service Quality) method. The method is to identify and prioritize consumer satisfaction. The dimensions used in this study are Reliability, Responsiveness, Assurance, Empathy and Physical Evidence. The research was carried out for a quarter of more than 3 months. This research was conducted at the location of Agriculture in Balung District. The questionnaire was distributed to 60 farmer respondents in Balung District using the Simple Random Sampling technique. Based on the results of the study, it can be concluded that: (1) there are 8 items that are considered unqualified and unsatisfactory, the rest have been considered satisfactory. (2) From the dimensions of Reliability, Responsiveness, Assurance, Empathy and Physical Evidence, only the service in the dimension of Responsiveness is considered very satisfactory by the farmers. Meanwhile, the dimensions of Reliability, Guarantee, Empathy and Physical Evidence of the service still need to be improved because there are still several items in each dimension that are still not in accordance with the expectations of farmers. The role of extension workers is very important and has a sustainable impact on the progress of agriculture in a region. Farmers consider the existence of extension important

**Keywords** — farmers, rice, services

#### 1. Introduction

Nationally, the agricultural sector is the backbone of Indonesia's economy and plays a role in food security strategic Sustainability and increased productivity of the agricultural sector have several conditions related to how technological innovations are efficient agricultural cultivation adopted, practices, adaptation to climate change and market dynamics, and farmers' ability to respond to change[3].

The level of progress of farming will be largely determined by how the ability of farmers and farmer institutions to respond to environmental changes. Facilitators that are expected to play a lot of roles are agricultural extension [4]. Agricultural extension is a formal

institution that aims to facilitate the learning assistance process of efforts to adopt innovation, and increase the capacity of farmers individually and in groups in aspects of knowledge and learning attitude skills. Thus, agricultural extension is very strategic in an effort to facilitate productivity and the speed of progress of farming and agriculture in general[5].

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On the other hand, the involvement of farmers in farmer groups is very important because farmer groups are institutions that have a role in facilitating farmers' needs in the context of dynamics, roles, and efforts to facilitate responses to environmental change[6]. Farmer groups are also a means for farmers in order to improve their farming skills related to patterns of accessing capital, agricultural inputs and facilities, technology [7][8] and accessing the



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community morning market produced. In this context, farmer groups and agricultural extension are two very important institutions. As a facilitator group, agricultural extension will have an impact on farmer groups [9]. Farmers' responses in receiving agricultural extension will be managed in the context of farmers' satisfaction with the extension services carried out by facilitators, in this case agricultural extension workers.

Agriculture in Indonesia is an important sector and is the livelihood of most people. Sociologically, farming has also cultured to form institutions that are aspects that guide behavior [1]. However, there are several problems with farming in Indonesia. Some of these problems are related to the area of land owned by farmers, institutions, and the ability of farmers to respond to changing challenges.

The government encourages farmers to form farmer groups accompanied by agricultural extension workers. The goal is to help farmers in improving the standard of living of farmers through empowerment with the development of Elementary school, one of the programs that must be carried out is education, skills and work. Agricultural counseling includes activities to provide knowledge and skills to Farmer Groups Extension activities in agricultural development act as a bridge that connects the practices carried out by farmers with agricultural knowledge and technology that is always evolving to be the needs of these farmers. This information can be obtained by farmers, among others, from PPL (Field Implementation Officer) through the implementation of agricultural extension activities. Counseling can be an effective means of wisdom to encourage the knowledge gap that exists in farmers.

Agricultural extension activities are essentially coaching people who are members of farmer groups, must be organized and developed in such a way that their expectations can be fulfilled as they should. Agricultural extension thus has challenges in the ability to identify community needs, facilitate modern management, and adequate market response. Counseling has a strategic role for the transformation of the environment [11].

Jember Regency is one of the districts in the province of East Java that has quite good agricultural conditions, including having several superior commodities such as rice, coffee, tobacco, and several horticultural products, the agricultural sector in Jember contributes to the local economy, absorbs a large share of labor, and facilitates the growth of other economic forms.

Based on an interview obtained from one of the extension workers in Balung District, Balung District is one of the areas in Jember Regency that is actively conducting counseling activities for rice farmers. Counseling for rice farmers is carried out on average once a month with counseling participants being a combination of all farmer groups in each village. The amount of rice production in one harvest in each village varies depending on the area of land owned. The villages of Balung Lor, Balung Tutul, Karang Duren and Curah Lele have a total production of 6.9 tons/ha with the number of farmer groups in each village as many as 8, 7, 6 and 8 farmer groups respectively. Meanwhile, the villages of Balung Kidul, Balung Kulon, and Karang Semanding have a total production of 6.8 tons/ha with the number of farmer groups in each village as many as 2, 7 and 7 farmer groups respectively. The lowest amount of rice production is in Gumelar village with a total production of 6.4 tons/ha with a total of 8 farmer groups. Based on this data, it can be seen that the 3 most productive villages are the villages of Balung Lor, Curah Lele and Gumelar with the highest amount of rice production.

Interaction between extension workers and farmers and farmer groups will provide an indication of how agricultural businesses in one region will be managed. Efforts to objectively identify how farmers are satisfied and how the level of extension services are very important to be carried out. One of the important methods in an effort to identify the level of quality for this extension service is the Servqual method or service quality where this method is an effort to identify and measure the quality of extension services compared to the expectations and perceptions of farmers as service recipients

### 2. Methods

This research is a research using the survey method. The survey method is a quantitative

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research method used to obtain data that occurred in the past or present, about beliefs, opinions, characteristics, behaviors, relationships of variables and to test several hypotheses about sociological and psychological variables from samples taken from certain populations, data collection techniques with observations (interviews or questionnaires) that are not indepth, and the results of the research tend to be generalized.

The information and data used in this study are: (1) The collection of primary data is carried out in two ways, namely as follows: Structured interviews with the questionnaire method, which is to provide a list of questions to the research respondents; second, the interview method, which is to ask and answer directly to experts (experts)) that are in accordance with the theme of the research; (2) Secondary data collection, secondary data in this study was obtained from companies related to data related to the research theme.

Population is a generalized area consisting of: objects or subjects that have certain quantities and characteristics that are determined by the researcher to be studied and then drawn conclusions. The population in this study is rice farmers in Balung District which consists of eight villages with a total of 4874 farmers.

In this study, 20 respondents were taken in 3 villages from 8 villages in Balung District, making a total of 60 respondents. Sampling was randomly selected from the three villages with the highest yield.

The research classification consists of five dimensions of service assessment, namely:

- a. Reliability includes two main aspects, namely consistency of performance and reliability. This means that the extension team is able to deliver its services correctly from the beginning.
- b. Responsiveness, namely the willingness and readiness of extension officers to help and serve farmers immediately.
- c. Guarantees, include knowledge, ability, and courtesy or kindness from the personal as well as the ability to gain trust and desire.
- d. Empathy, which includes maintaining and providing an individual or personal level of

- attention to the needs of extension participants.
- e. Physical evidence, including the appearance of physical facilities, equipment, personnel, and communication materials of the extension team.

The instrument demonstrates fulfilled reliability and validity. The probability value of each statement item for the variables Reliability, Responsiveness, Assurance, Empathy, Physical Evidence has a greater calculation value than the rtable at a significant level ( $\alpha$ ) of 5%, which is 0.218, so that it can be stated that the statement items in the research instrument (Questionnaire) are valid so that they are suitable for use in data collection. Based on the test results, it was shown that the value of Cronbach's Alpha Perception of 0.614 and Expectation of 0.728 was greater than the critical value of reliability of 0.60, so it can be concluded that the research instrument used was reliable.

### 3. Discussion

Based on the analysis of information and data that has been collected, several results on the paameter and variable fasting measurement can be described as follows:

Reliability can be seen that the services of the extension team in providing consulting services related to maintenance and actions in handling problems, according to the farmers are still considered unsatisfactory so there is still a need for service improvement, while the aspect of recording documents about rice cultivation is considered satisfactory.

Responsiveness can be seen that regarding the information of the time and timeliness of extension workers in attending meetings, it is considered by farmers to be very satisfactory so it should be maintained.

Assurance can be seen that the extension workers are still not able to foster the trust of farmers in the material presented and the value of information is still considered insufficient so that there is still a need to improve the quality of service, while the ability of officers to answer questions asked by farmers is considered satisfactory.

Empathy can be seen that extension workers have been considered very good in

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prioritizing the interests of farmers and the extension time has been adjusted to the time agreed by farmers, but extension officers are still considered incapable of meeting the needs of farmers.

Physical evidence can be seen that the products used by extension workers are still unsatisfactory and at the time of the extension work, farmers have not been given material sheets to be delivered so that the quality of service still needs to be improved, while the appearance of extension workers is considered neat and satisfactory.

The Reliability dimension is considered still insufficient to satisfy farmers, this is because two assessment items are still below farmers' expectations. In the consultation service provider related to plant maintenance, the extension team has given as much time as possible for farmers to consult, but according to the farmers, this is still not satisfactory. This means that extension activities are still below the expectations of farmers because there are some farmers who are not satisfied with the answers from the extension team. Furthermore, in the second item regarding the handling of problems, the extension team is considered to still be unable to find a solution to farmers' problems properly so that the problems complained about still often occur. In the third item about document inventory, the extension team has prepared complete documents and notes at the time of providing agricultural extension materials, especially related to rice cultivation.

Based on testing using crosstabs, it was found that those under the age of 50 years assessed that the services provided by the extension officers were of quality satisfactory. Meanwhile, the age of less than 60 years and more than 60 years old consider the services provided by the extension officers to be unsatisfactory and of poor quality. Judging from the last education, farmers with an undergraduate level education background stated that the services provided by extension officers were satisfactory, but some were still not satisfied with services provided. Farmers background in high school education stated that the services provided by extension officers were considered quality and satisfactory, but some considered them to be of poor quality. Farmers with a Junior High School education background stated that the services provided by the extension officers were considered not of good quality, while farmers with an Elementary School education background stated that the services provided by the extension officers were considered poor quality and unsatisfactory.

The Responsiveness Dimension considered to have met the expectations of farmers, such as informing the timing of the implementation of counseling where extension team always comes first even though the farmers have not gathered completely, so often the extension team is still waiting for farmers to start implementing the extension. In the second item regarding farmer services immediately, it is considered to have met the expectations of farmers, the extension team always serves farmers immediately even though it is outside of extension activities. The third item regarding the availability of consulting services related to farmers' problems is considered to have met the expectations of farmers. Even outside of working hours, the extension team is still doing farmer consulting services, they can directly come to the agriculture office to meet the extension team Convenience when meeting on the road, the extension team is still providing services to farmers.

Based on testing using crosstabs, it was found that the age of less than 50 years and the age of less than 60 years assessed that the services provided by the extension officers were in accordance with the wishes of the farmers. Meanwhile, the age of more than 60 years assessed the services provided by the counseling officers as quality and satisfactory. Judging from education, farmers the last with Undergraduate Level education background stated that the services provided by extension officers were satisfactory but some were still not satisfied with the services provided. Farmers with a background in high school education stated that the services provided by the extension officers were considered satisfactory. Farmers with a Junior High School education background state that the services provided by extension officers are considered not of high quality and unsatisfactory Farmers with an Elementary School education background state that the services provided by extension officers are considered to be of high quality and satisfactory.

The Guarantee dimension is considered still not able to meet the expectations of farmers, this is because the extension team is still unable to foster the trust of farmers. The trust related to the extension material presented is not in line with the knowledge of senior farmers. In the second item, the extension team is still considered to be not suitable for value in the delivery of information. In the third item, regarding the ability of extension officers to answer clearly the questions given by farmers, they have been able to meet farmers' expectations. Clarity is associated with the ability of extension officers to always use language that is simple, easy to understand and used daily by farmers.

Based on testing using crosstabs, it was found that the age of less than 50 years and the age of more than 60 years assessed that the services provided by the extension officers were of high quality according to the wishes of the farmers. In the age group of less than 60 years old, the services provided by the extension officers are not satisfactory. Judging from the last education of farmers with an Undergraduate Level and Junior High School education background, it is stated that the services provided by extension officers are not of the same quality as the services provided. Farmers with a background in high school education stated that the services provided by the extension officers were considered satisfactory. Farmers with an educational background of Elementary School stated that the services provided by the extension officers were considered to be of high quality and satisfactory.

The Empathy Dimension is considered to be able to meet farmers' expectations regarding prioritizing the interests of farmers because the extension team always provides services even though they are not during working hours. In contrast to the second item regarding the extension team being able to meet the needs of farmers, it is still considered below expectations because the extension team has not been able to meet the needs of farmers as a whole. In the third aspect regarding the time of implementation of the plantation, it is adjusted to the farmers' free time so that it is considered to be able to meet the expectations of farmers.

Based on testing using crosstabs, it was found that people under 50 years old and less than 60 years old rated the services provided by counseling officers as quality and satisfactory. Meanwhile, the age of more than 60 years considers the services provided by counseling officers to be of high quality. Based on the analysis using crosstabs, it was found that the age of less than 50 years and the age of less than 60 years assessed that the services provided by extension officers were in accordance with the wishes of the farmers. Meanwhile, the age of more than 60 years assessed the services provided by the counseling officers as quality and satisfactory. Judging from the last education, farmers with Undergraduate Level and Junior High School education backgrounds stated that the services provided by extension officers were of high quality. Farmers with a background in high school education stated that the services provided by extension officers were considered unsatisfactory. Farmers with an elementary school education background stated that the services provided by the extension officers were considered satisfactory.

The dimension of physical evidence in the first item regarding the introduction of modern products is considered to still not meet the expectations of farmers. This condition is caused because the products brought by extension workers still do not have products that are acceptable or easy for farmers. In the second item regarding the appearance of the extension team, it was assessed by the farmers that they had met expectations even though they were not in working hours. The third item related to the provision of hand outs or materials at the time of counseling is considered to still not meet the expectations of farmers because the extension team often does not provide material materials to farmers and it causes farmers to judge that the lacks readiness extension team in the implementation of counseling.

Based on testing using crosstabs, it was found that the age of less than 50 years and the age of less than 60 years assessed that the services provided by the extension officers were not of good quality. Meanwhile, the age of more than 60 years considers the services provided by the counseling officers to be satisfactory. Judging from the last education of farmers with an

educational background at the Undergraduate Level, High School, Junior High School, Elementary School stated that the services provided by extension officers were considered not of high quality.

The results of the analysis showed that demographic conditions had a correlation with learning experience. Perception also affects the satisfaction obtained from the services provided. Demographic characteristics have an influence on the difference in farmers' satisfaction levels in the quality of counseling provided by the farmers [12].

# 4. Conclusion

Based on the results of Servqual's analysis of the extension team's services to rice farmers, it can be concluded that of all the existing items. there are 8 items that are considered unqualified and unsatisfactory, the rest have been considered satisfactory. In the dimension of quality including reliability, measurement responsiveness, guarantee, empathy and physical evidence, only the service in the responsiveness dimension is considered very satisfactory by farmers. In the dimensions of reliability, guarantee, empathy and physical proof of service still need to be improved because there are still several items in each dimension that are still not in accordance with the expectations of farmers.

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# 6. References

[1] Muksin, Rizal, and R. Iskandar, "Analysis of the Sustainable Status of Post Disaster Crop Production in Sigi Regency, Central Sulawesi Province," IOP Conf. Ser. Earth Environ. Sci., vol. 672, no. 1, 2021, doi: 10.1088/1755-1315/672/1/012031.

- [2] F. Rozi et al., "Indonesian foodstuffs in facing global food crisis: Economic aspects of soybean farming," J. Agric. Food Res., vol. 19, no. October 2024, p. 101669, 2025, doi: 10.1016/j.jafr.2025.101669.
- [3] E. Antriyandarti, D. N. Suprihatin, A. W. Pangesti, and P. L. Samputra, "The dual role of women in food security and agriculture in responding to climate change: Empirical evidence from Rural Java," Environ. Challenges, vol. 14, no. January, p. 100852, 2024, doi: 10.1016/j.envc.2024.100852.
- [4] W. Wulandari, S. Bulkis, M. S. S. Ali, and ..., "Extension Performance in Agricultural Development: The Urgency of Integrated Agricultural System Education for Farmers," ... Semin. Student ..., pp. 297–306, 2024, [Online]. Available: https://journal.ummat.ac.id/index.php/issrectec/article/view/22427%0Ahttps://journal.ummat.ac.id/index.php/issrectec/article/download/22427/pdf.
- [5] M. S. Amghani, H. Miladi, M. Savari, and M. Mojtahedi, "Factors influencing the agricultural extension model sites in Iran," Sci. Rep., vol. 15, no. 1, pp. 1–20, 2025, doi: 10.1038/s41598-025-94151-6.
- [6] K. Ofosu-Ampong, A. Wuletawu, A. Müller, S. Adjei-Nsiah, R. Boateng, and B. Acheampong, "Framing Behaviour Change for Sustainable Agriculture: Themes, Approaches, and Future Directions," Farming Syst., vol. 3, no. 1, p. 100123, 2024, doi: 10.1016/j.farsys.2024.100123.
- [7] G. B. Adesiji, J. Y. Adelowo, S. E. Komolafe, and T. T. Adesiji, "Farmers' perceived rating and usability attributes of agricultural mobile phone apps," Sekolah Menengah Atasrt Agric. Technol., vol. 8, no. July, p. 100501, 2024, doi: 10.1016/j.atech.2024.100501.
- [8] A. K. Wijayanto, L. B. Prasetyo, S. A. Hudjimartsu, G. Sigit, and C. Hongo, "Textural features for BLB disease damage assessment in paddy fields using drone data and machine learning: Enhancing disease detection accuracy," Sekolah Menengah Atasrt Agric. Technol., vol. 8, no. April, p. 100498, 2024, doi: 10.1016/j.atech.2024.100498.
- [9] P. M. Danjumah, M. T. Asiamah, E. K. Tham-Agyekum, S. A. Ibraham, and L. K. Mensah, "Dynamics of agricultural extension delivery services to rice farmers in Ghana," Heliyon, vol. 10, no. 5, p. e26753, 2024, doi: 10.1016/j.heliyon.2024.e26753.
- [10] M. H. Jamil et al., "Effectiveness of Agricultural Extension on Paddy Rice Farmer's Baubau City, Southeast Sulawesi, Indonesia," Sustain., vol. 15, no. 4, 2023, doi: 10.3390/su15043773.
- [11] Muksin, D. A. Perwiraningrum, D. I. Amareta, and D. Purwoko, "Critical factors in local food development policies, farming, and coping mechanisms mothers with stunting children in Jember," IOP Conf. Ser.

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Earth Environ. Sci., vol. 980, no. 1, p. 012056, 2022, doi: 10.1088/1755-1315/980/1/012056.

[12] C. Mukami, W. Nyateko, K. Nkanata, and D. Nthiwa, "Determinants of Sekolah Menengah Atasllholder farmers' satisfaction with agricultural extension services in Embu County, Kenya," vol. 125, no. 2, pp. 209–218, 2024.