

**TOMATO FARMERS' PERCEPTIONS OF AGRICULTURAL EXTENSION WORKER
PERFORMANCE IN LEWOKELENG VILLAGE, ILE BOLENG DISTRICT, EAST FLORES
REGENCY**

**(Persepsi Petani Tomat terhadap Kinerja Penyuluh Pertanian di Desa Lewokeleng, Kecamatan Ile
Boleng, Kabupaten Flores Timur)**

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ABSTRACT

This study aimed to determine tomato farmers' perceptions of the performance of agricultural extension workers and to identify the factors influencing these perceptions in Lewokeleng Village, Ile Boleng District, East Flores Regency. The research location was selected purposively, and the entire population of 35 tomato farmers was used as respondents through a census method. Data were collected through observation, interviews, documentation, and questionnaires using a Likert scale. Quantitative descriptive analysis was used to measure farmers' perceptions, while multiple linear regression was used to identify influencing factors. The results show that farmers' perceptions of agricultural extension worker performance were generally in the moderately satisfactory category, with 57.14% of respondents. The role of extension workers as communicators and innovators was perceived as relatively low, whereas their roles as facilitators and motivators were assessed more favorably. Regression results indicate that knowledge had a significant effect on farmers' perceptions, while farming experience, extension facilities, and social interaction had no significant effect.

Keywords: perception; tomato farmers; extension worker performance; agricultural extension

ABSTRAK

Penelitian ini bertujuan untuk mengetahui persepsi petani tomat terhadap kinerja penyuluh pertanian serta mengidentifikasi faktor-faktor yang memengaruhi persepsi tersebut di Desa Lewokeleng, Kecamatan Ile Boleng, Kabupaten Flores Timur. Lokasi penelitian dipilih secara purposif, dan seluruh populasi yang terdiri dari 35 petani tomat dijadikan responden melalui metode sensus. Data dikumpulkan melalui observasi, wawancara, dokumentasi, dan kuesioner dengan menggunakan skala Likert. Analisis deskriptif kuantitatif digunakan untuk mengukur persepsi petani, sedangkan analisis regresi linear berganda digunakan untuk mengidentifikasi faktor-faktor yang berpengaruh. Hasil penelitian menunjukkan bahwa persepsi petani terhadap kinerja penyuluh pertanian secara umum berada pada kategori cukup memuaskan, dengan persentase responden sebesar 57,14%. Peran penyuluh sebagai komunikator dan inovator dipersepsikan relatif rendah, sedangkan peran mereka sebagai fasilitator dan motivator dinilai lebih baik. Hasil regresi menunjukkan bahwa pengetahuan berpengaruh signifikan terhadap persepsi petani, sementara pengalaman usahatani, fasilitas penyuluhan, dan interaksi sosial tidak berpengaruh secara signifikan.

Kata kunci: persepsi, petani tomat, keragaan penyuluh pertanian, peneruluh pertanian

INTRODUCTION

Agricultural development in developing countries is generally focused on the agricultural sector in order to improve food quality and meet national food needs. The agricultural sector also has a strategic role in improving the welfare of rural communities. One of the government's efforts to encourage progress in the agricultural sector is the enactment of Law Number 16 of 2006 concerning Agricultural, Fisheries, and Forestry Extension Systems. The law states that extension is a process of empowering farmers as main actors and business actors through learning activities so that they are able to access market information, technology, capital, and other resources to increase productivity, business efficiency, income, welfare, and awareness of environmental conservation (Amrullah, Mukti, & Taufik, 2019).

In practice, agricultural extension is one of the important policies implemented by the government to promote agricultural development. Extension aims to transfer knowledge and technology to farmers so that they are able to adopt innovations that can increase agricultural yields. However, the effectiveness of extension depends greatly on the suitability of the material to farmers' needs and the extent to which the information can be accepted and applied. Farmers have the freedom to accept or reject suggestions given by extension workers; therefore, the level of acceptance of information and extension programs can vary (Ilham Ali, 2018).

Farmers' perceptions of agricultural extension worker performance are an important factor determining the success of extension programs. Perception is the individual process of interpreting and assessing information received based on experience, knowledge, and the social environment. A positive perception of extension workers will encourage farmers' active participation in extension activities, whereas a negative perception can inhibit farmer involvement and the adoption of agricultural innovations offered (Sugihartono & Andriani, 2021).

The performance of agricultural extension workers strongly influences extension success. According to Bahua and Andriani et al. (2021), extension worker performance is reflected in their ability to carry out roles as communicator, educator, innovator, facilitator, and motivator. Extension workers with good performance are able to deliver information appropriately according to farmers' needs, encourage innovation adoption, and increase farm productivity and efficiency. Conversely, less optimal extension performance can inhibit farmer learning processes and reduce extension effectiveness.

Previous studies show that farmers' perceptions of extension worker performance remain diverse. Studies by Nikolaus et al. (2019) and Bano et al. (2020), published in Buletin Ilmiah IMPAS, found that some farmers considered the role of extension workers not yet optimal, especially in communication and technical assistance. Meanwhile, Finit et al. (2021) and Walen et al. (2021) stated that the role of extension workers as motivators and facilitators was felt more strongly by farmers than their role as innovators.

Farmers' perceptions of extension worker performance are also influenced by farmers' internal characteristics. Saputri and Sulistyaninsih (2019) stated that farmers' knowledge level has a significant effect on farmers' perceptions of extension worker performance. Farmers with better knowledge tend to understand extension materials more easily and assess their benefits more objectively. This finding is supported by Putri et al. (2019), who stated that extension worker competence and the suitability of extension materials have a greater influence on farmers' perceptions than the availability of extension facilities.

Based on a preliminary survey conducted in Lewokeleng Village, Ile Boleng District, East Flores Regency, it was found that agricultural extension workers had carried out field assistance. However, this assistance had not been felt evenly by all farmers. Some farmers felt helped because they often received visits and guidance, whereas other farmers stated that they had not received direct assistance. This uneven assistance created differences in experience and shaped diverse perceptions of agricultural extension worker performance. Other factors, such as farmers' educational background, frequency of interaction with extension workers, and harvest success, also influenced farmers' views of extension activities.

Lewokeleng Village is one of the areas with potential for tomato cultivation development. Most residents work as farmers, and tomato cultivation activities are relatively intensive. Nevertheless, tomato farm productivity remains suboptimal and depends heavily on the quality of assistance and extension received. Lamatwelu et al. (2024) showed that agricultural extension workers have an important role in increasing tomato farm productivity in Lewokeleng Village, although uneven assistance intensity causes differences in farmers' perceptions of extension worker performance.

Hidayat et al. (2024) also emphasized that field agricultural extension workers have a strategic role in encouraging agricultural innovation adoption if they are able to adapt extension approaches to farmers' social conditions and capacities. Therefore, understanding farmers' perceptions of agricultural extension worker performance and the factors that influence them is very important as a basis for evaluating and improving the extension system.

Based on this description, it can be concluded that farmers' perceptions of agricultural extension worker performance are influenced by extension worker performance itself and by farmers' internal factors, such as knowledge level, farming experience, and intensity of interaction with extension workers. Therefore, research is needed to examine tomato farmers' perceptions of agricultural extension worker performance and the factors influencing these perceptions as a basis for improving extension effectiveness in the future.

METHODS

The study was conducted in Lewokeleng Village, Ile Boleng District, East Flores Regency, from September to October 2025. The location was selected purposively because it is a tomato cultivation center and because extension activities were not perceived evenly by farmers. The population consisted of all 35 tomato farmers in the village, and all were selected as respondents using a census method. Primary data were obtained through interviews, observation, Likert-scale questionnaires, and documentation, while secondary data were obtained from village profiles and relevant literature.

To answer the first objective, namely to determine farmers' perceptions of agricultural extension worker performance in Lewokeleng Village, Ile Boleng District, East Flores Regency, quantitative descriptive analysis was used. Measurement was carried out using a Likert scale by assigning scores to respondents' answers to the statements submitted. To measure farmers' perceptions of extension worker performance, several questions were given to tomato farmers to obtain their opinions or assessments of agricultural extension worker performance.

Farmers' answers were scored according to the Likert scale as explained by Levis (2013). A very satisfactory answer was given the highest score (5), a satisfactory answer was given a score of (4), a moderately satisfactory answer was given a score of (3), an unsatisfactory answer was given a score of (2), and a very unsatisfactory answer was given a score of (1). Because there were five classes, the five classes were divided using the same interval value. The minimum percentage of score achievement was calculated as 20%, the maximum percentage as 100%, the range as $100\% - 20\% = 80\%$, and the class width as 80% divided by 5 categories, resulting in an interval of 16%.

Table 1. Reference Categories for Tomato Farmers' Perception Scores

No	Score Percentage	Perception Category
1	0-36	Very unsatisfactory
2	36-52	Unsatisfactory
3	52-68	Moderately satisfactory
4	68-84	Satisfactory
5	84-100	Very satisfactory

Source: Processed primary data, 2025.

The average score for all respondents was obtained by dividing each respondent's average score by the number of respondents. The percentage achievement of the maximum score was then compared with the reference category. After the maximum score achievement value was known, this value was used to determine the perception category.

To answer the second objective, namely to identify the factors influencing farmers' perceptions of agricultural extension worker performance in Lewokeleng Village, Ile Boleng District, East Flores Regency, multiple linear regression analysis was used. This analysis explains the influence of independent variables on the dependent variable in this study. The regression model used was: $Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + e$, where Y is farmers' perception of agricultural extension worker performance, a is the regression constant, b is the regression coefficient of the independent variables, X1 is farming experience, X2 is knowledge, X3 is extension facilities, and X4 is social interaction.

RESULTS AND DISCUSSION

Lewokeleng Village is located in Ile Boleng District, East Flores Regency, with an area of approximately 3.02 km². The village is about 6 km from the district capital and 34 km from the regency capital. Most of the area is lowland at 0-500 meters above sea level. The village borders East Adonara District to the west, Lamakera Strait to the south, Badelewun Village to the east, and Lewat Village to the north.

The 35 tomato farmer respondents were mostly in the productive age group of 40-49 years, totaling 22 people (62.86%). Male respondents dominated, and most respondents had elementary education. Farming experience was dominated by 5-10 years, and the largest landholding category was 0.5-1 ha. Most respondents were members of farmer groups and reported receiving regular extension assistance.

Table 2. Tomato Farmers' Overall Perception of Extension Worker Performance

Perception Category	Frequency	Percentage (%)
Very unsatisfactory	3	8.57

Unsatisfactory	10	28.57
Moderately satisfactory	20	57.14
Satisfactory	1	2.86
Very satisfactory	1	2.86

Source: Processed primary data, 2025.

Most respondents assessed extension worker performance as moderately satisfactory (57.14%). This indicates that extension services have functioned at a moderate level, but improvement is still needed in communication effectiveness, assistance intensity, motivation, and innovation delivery.

Table 3. Perception of Extension Workers as Communicators

Perception Category	Frequency	Percentage (%)
Very unsatisfactory	5	14.29
Unsatisfactory	24	68.57
Moderately satisfactory	4	11.43
Satisfactory	1	2.86
Very satisfactory	1	2.86

Source: Processed primary data, 2025.

Farmers' perceptions of the communication role were dominated by the unsatisfactory category, indicating the need to strengthen information delivery and two-way communication.

Table 4. Perception of Extension Workers as Educators

Perception Category	Frequency	Percentage (%)
Very unsatisfactory	9	25.71
Unsatisfactory	10	28.57
Moderately satisfactory	13	37.14
Satisfactory	2	5.71
Very satisfactory	1	2.86

Source: Processed primary data, 2025.

The educator role was mostly assessed as moderately satisfactory, showing that learning activities had occurred but were not yet optimal.

Table 5. Perception of Extension Workers as Innovators

Perception Category	Frequency	Percentage (%)
Very unsatisfactory	6	17.14
Unsatisfactory	15	42.86
Moderately satisfactory	12	34.29
Satisfactory	1	2.86
Very satisfactory	1	2.86

Source: Processed primary data, 2025.

The innovator role was still limited because most respondents rated it unsatisfactory or moderately satisfactory.

Table 6. Perception of Extension Workers as Facilitators

Perception Category	Frequency	Percentage (%)
Very unsatisfactory	3	8.57
Unsatisfactory	12	34.29
Moderately satisfactory	16	45.71
Satisfactory	3	8.57
Very satisfactory	1	2.86

Source: Processed primary data, 2025.

The facilitator role was perceived more positively, with the largest share in the moderately satisfactory category.

Table 7. Perception of Extension Workers as Motivators

Perception Category	Frequency	Percentage (%)
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Very unsatisfactory	5	14.29
Unsatisfactory	8	22.86
Moderately satisfactory	9	25.71
Satisfactory	10	28.57
Very satisfactory	3	8.57

Source: Processed primary data, 2025.

The motivator role had the highest satisfactory response, indicating that extension workers were relatively able to encourage farmers' enthusiasm.

Table 8. Multiple Linear Regression Results

Variable	B	Std. Error	Beta	t	Sig.
Constant	21.583	5.200		4.151	0.000
Experience	0.588	0.516	0.212	1.139	0.264
Knowledge	0.969	0.391	0.329	2.475	0.019
Facilities	0.619	0.588	0.205	1.053	0.301
Interaction	0.650	0.609	0.222	1.067	0.294

Source: Processed primary data, 2025.

Based on the t-test results in Table 8, the following explanations were obtained:

- The Experience variable (X1) has a significance value of $0.264 > 0.05$, with a calculated t-value of 1.139. This result indicates that experience does not have a significant effect on perception. This condition suggests that the level of experience has not yet made a meaningful contribution to the formation of perception.
- The Knowledge variable (X2) has a significance value of $0.019 < 0.05$, with a calculated t-value of 2.475. This indicates that knowledge has a positive and significant effect on perception. The higher the level of knowledge possessed, the better the perception formed. This result is consistent with the study by Saputri and Sulistyaningsih (2019), which stated that farmers' knowledge has a significant influence on farmers' perceptions of extension workers' performance in the development of organic rice farming among farmer groups.
- The Extension Facilities variable (X3) has a significance value of $0.301 > 0.05$, with a calculated t-value of 1.053. This result indicates that extension facilities do not have a significant effect on perception. The availability of facilities and infrastructure has not yet become a dominant factor in shaping perception. This finding is in line with Putri et al. (2022), who found that the preparation of extension materials and the profession of agricultural extension workers did not have a significant relationship with farmers' perception levels.
- The Interaction variable (X4) has a significance value of $0.294 > 0.05$, with a calculated t-value of 1.067. This result indicates that interaction does not have a significant effect on perception. Interaction activities have not been strong enough to improve positive perceptions.

Table 9. F-Test Results

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	5686.051	4	1421.513	21.597	0.000
Residual	1974.635	30	65.821		
Total	7660.686	34			

Source: Processed primary data, 2025.

The F-test significance value of 0.000 indicates that experience, knowledge, facilities, and interaction jointly affected farmers' perceptions.

Table 10. Coefficient of Determination

R	R Square	Adjusted R Square	Std. Error
0.862	0.742	0.708	8.113

Source: Processed primary data, 2025.

The R Square value of 0.742 indicates that the four independent variables explained 74.2% of the variation in farmers' perceptions, while the remaining 25.8% was explained by other factors outside the model.

CLOSING

Conclusion

1. Farmers' perceptions of agricultural extension worker performance in Lewokeleng Village were generally in the moderately satisfactory category, with 57.14% of respondents.
2. Among extension roles, the facilitator role had the strongest moderately satisfactory assessment, while communicator and innovator roles still required improvement.
3. Only knowledge had a positive and significant effect on farmers' perceptions; experience, facilities, and interaction were not significant.

Recommendations

1. Extension workers should improve service quality through more communicative, participatory, and continuous approaches.
2. Extension activities should use practical methods such as field demonstrations and direct training.
3. Local governments and related agencies should provide stronger facilities and training support for extension workers.

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