

STUDY OF AGRICULTURAL EXTENSION SERVICES TO RICE FARMERS IN PANCA AGUNG VILLAGE

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ABSTRACT

The agricultural extension aims to change the knowledge, skills, and attitudes of farmers for the better. The services provided by extension workers in the extension process are factors that can affect the achievement of agricultural extension goals. This study aims to (1) know the response of farmers to the attributes of agricultural extension services in Panca Agung Village and (2) determine the level of satisfaction of rice farmers with agricultural extension services in Panca Agung Village. The data analysis used in this study is (1) Descriptive qualitative to determine the attributes of agricultural extension services in Panca Agung Village, (2) Customer Satisfaction Index (CSI) to determine the level of satisfaction of rice farmers with agricultural extension services in Panca Agung Village. The results showed (1) a. reliable extension workers in helping to solve the problems of farmers. b. Swiftly responding to complaints and easy to find. c. Provide guarantees for the success of the innovation provided d. Have empathy, care, a good attitude, use polite language, and be easy to understand. e. Proving the correctness of the innovation delivered (2) the level of satisfaction of rice farmers with agricultural extension workers in Panca Agung Village, including in the satisfied category with a CSI value of 75.34%. This value is in the range between $60\% < \text{CSI} \leq 80\%$.

Keywords:

Extension,
Extension Services,
Rice Farmer

INTRODUCTION

Agricultural extension workers provide information, knowledge, and skills to farmers to increase the productivity and sustainability of

agricultural businesses. The role of extension workers is very important in empowering the community to realize the welfare of farmers and provide effective services to farmers [1].

Currently, agriculture faces complex challenges, where farmers often face various obstacles in running their farming businesses such as climate change, policy changes, technological changes, and market risks. The needs of farmers also continue to change with the times, farmers face global competition, so extension management competencies in learning, communication, and innovation, as well as extension services, need to be improved [2].

This condition is also experienced in North Kalimantan, especially in Panca Agung Village. There are 4 agricultural extension workers in Tanjung Palas Utara District, but only 1 extension officer is on duty in Panca Agung Village, while the number of rice farmer groups is 9, with 223 members. These data show that there is still a lack of extension workers in Panca Agung Village which impacts the services provided by extension workers to farmers who are not optimal. If seen from the ratio of the number of extension agents and farmers it is indeed high, but this can be overcome by the competence and performance of extension workers in providing services to farmers so that the objectives of extension are still achieved. involved in extension activities [3]. Based on these problems, it is important to research farmers' responses to the service attributes of extension agents and the level of farmer satisfaction with the services provided by extension agents.

METHOD

Location and Time

This research was conducted in Panca Agung Village, Tanjung Palas Utara District, Bulungan Regency. The research implementation time was carried out for 6 months from the preparation of the proposal to the report.

Sampling Method

The population in this study were members of active farmer groups in Panca Agung Village, totaling 223 people. samples were taken using the Quota sampling method. The number of samples was 65 people with 30% each taken from each farmer group which included the Mulyo, Murni, Panca Karya, Sampurna, Setia Bakti, Sido Muncul, Subur, Suka Maju and Sumber Rezeki Farmers Groups.

Types and Collection of Data

Types of data include primary and secondary data. Data collection was done through interviews, observation, and literature study.

Data analysis

Data analysis used in this study is descriptive analysis and Customer Satisfaction Index (CSI) analysis. Descriptive analysis is analyzing, describing, and summarizing various conditions, and situations from various data collected in the form of interviews or observations regarding the problems studied that occur in the field [4]. The Customer Satisfaction Index (CSI) Analysis Method determines the overall level of customer satisfaction by showing the level of importance of product or service attributes

This index measurement is carried out in 4 (four) stages, Alam [5].

a) Finding the Means Important Score (MIS) and Means Satisfaction Score (MSS), this value is obtained based on the average value of the level of satisfaction and the average value of the interests of each respondent.

$$MIS = \frac{\sum_{i=1}^n Y_i}{n}$$

$$MSS = \frac{\sum_{i=1}^n X_i}{n}$$

Information:

N = Number of respondents

Y_i = Satisfaction value attributed to -i

X_i = Importance value attributed to -i

b) Create Weight Factor (WF), this weight is the percentage of the MSS value of each attribute to the MIS value of all attributes. The formula is as follows

$$WF = \frac{MIS_i}{\sum_{i=1}^p MSS_i} = x 100\%$$

Information:

MIS_i = the average value of satisfaction to -i

$\sum_{i=1}^p MSS_i$ = total average satisfaction from -i to -p

c) Make a Weight Score (WS), this weight is the multiplication of the Weight Factor (WF) and the Means Satisfaction Score (MSS) or the average level of importance, the formula is as follows:

$$WS_i = WFi \times MSS$$

Total Weight Score (WS) attributed from -1 (a-1) to (a-p) is Weight Average Total (WAT).

d) Define value CSI

$$\frac{WAT}{HS} \times 100\%$$

Information:

WAT = Total average satisfaction score of -I to-p

HS = maximum scale used

e) The satisfaction index criteria use a range of 0 to 100% (not satisfied to very satisfied), that is, the highest satisfaction is achieved when the CSI value shows 100%. To create a numeric linear scale, start by finding the scale range (RS) with the following formula:

$$RS = \frac{m-n}{b}$$

Information:

RS = Scale range

m = Highest score

n = Lowest score

b = The number of classes to be created

The range of scales for CSI that will be used in this study are:

$$RS = \frac{(100\% - 0\%)}{5} = 20\%$$

Based on the calculated scale range, 5 (five) satisfaction criteria classes can be made as listed in the following table:

Tabel 3.2 Value Criteria *Customer Satisfaction Index* (CSI)

Value CSI	Criteria CSI
$0% < CSI \leq 20%$	very dissatisfied
$20% < CSI \leq 40%$	Not satisfied
$40% < CSI \leq 60%$	Quite satisfied
$60% < CSI \leq 80%$	Satisfied
$80% < CSI \leq 100%$	Very satisfied

Source: Secondary Data, Subagio [6]

RESULT AND DISCUSSION

1.1. Farmers' Responses to Agricultural Extension Service Attributes in Panca Agung Village

1. Reliability

Some of the responses of farmers to the reliability of extension agents were seen from the reliability of extension agents in providing information, helping to solve problems faced by farmers, as well as providing advice and technical guidance on agricultural activities. Some farmers certainly have a different view.

Extension officers in Panca Agung Village routinely carry out extension activities and provide materials and solutions to problems faced by farmers. This is in accordance with what was disclosed by Mr. Margono (53 years) that:

“Untuk kegiatan penyuluhan dan pelatihan yang dilakukan oleh PPL biasanya itu sebulan sekali, dan itu dilakukan secara rutin tiap bulan. Dengan kegiatan itu sangat membantu saya dan juga teman-teman yang lain dalam mendapatkan informasi”.

The activities carried out by extension workers in overcoming the problems faced by farmers are

carrying out the counseling process on pest control, counseling on the use of fertilizers, counseling about the distance between plants, and controlling rice pests and diseases, in addition to helping provide training in administration, according to what Mr. Muksin said (54 years) that:

“Selain hanya memberi informasi tentang pertanian kami juga dibantu dalam membuat buku kelompok tani seperti (daftar pengurus, daftar kegiatan, hasil iuran kelompok dan lain-lain), kalau kami tidak dibantu oleh penyuluh kami pasti ndk bisa karna kurangnya pemahaman bagaimana langkah sama cara pembuatannya, menurut saya ini sangat membantu bagi kami yang kurang paham tentang itu”.

2. Responsiveness

Alertness in extension services reflects the ability of extension workers to provide responsive, efficient, and effective services to communities or individuals in need. The extension workers in Panca Agung Village serve the requests and needs of farmers but are not quick enough. As expressed by Mrs. Sukmi (49 years):

“Respon dari PPL saat menanggapi kebutuhan dari kami cukup baik dan ramah hanya saja butuh waktu karna mungkin kesibukan dari PPL tersebut, jadi jika petani membutuhkan PPL dengan cepat petani harus bertemu langsung”.

Extension officers are alert, always ready to provide services according to the specified schedule, and maintain availability to meet with the audience, answer questions, or provide information consistently, but the extension workers in Panca Agung Village are less

responsive in responding to problems faced by farmers as revealed by Mr. Kolik (53 years):

“Jika kami memiliki keluhan dalam pertanian kami langsung menanyakan kepada PPL, respon dari PPL cukup baik hanya saja lambat dalam pergerakan, mungkin karna kesibukan atau mempelajari kembali masalah yang kami hadapi. misalnya kami sering menemukan ular pemangsa hama, lalu kami mengeluhkan itu karna merasa terganggu dan takut, adapun respon PPL itu namun kurang cepat”.

3. Assurance

Guarantee in counseling services. Ensuring the quality and effectiveness of counseling. Some guarantees that are usually provided include competent experts, accurate and up-to-date information, ongoing counseling, and available educational materials.

Extension officers in Panca Agung Village have undergraduate qualifications and have attended several training and technical guidance so that they are competent as extension workers. There are several programs carried out by extension workers in Panca Agung Village for farmers, including the extension of rice field irrigation, provision of facilities and infrastructure, fertilizer subsidies, and others. This is in accordance with what was conveyed by Mrs. Maryam (49 years).

“Untuk kegiatan penyuluhan yang dilakukan penyuluh untuk kami itu ada yang sudah terbukti, seperti membantu dalam proses irigasi persawahan, penyediaan sarana prasana petani (mesin perontok padi), membantu dalam subsidi pupuk dan lain-lain, menurut saya yang dilakukan

penyuluh sudah cukup bagus, dia selain memberi pengetahuan dia juga membantu dalam proses melakukannya”.

4. Empathy

Empathy is the ability to understand and feel the feelings, thoughts, and needs of other people. In the context of agricultural extension services, having the ability to empathize is very important to understand the objectives of extension, in this case, farmers. Empathy can be shown by listening carefully, trying to understand situations, not judging, and adapting to their communication style.

The empathy shown by extension workers in Panca Agung Village through attitudes and behavior, where extension workers always listen to farmers' complaints properly, are polite in communicating and can adjust the way of communicating with farmers. This is reinforced by the statement of Mrs. Norhayati (47 years) that:

“Untuk sikap dari penyuluh yang saya liat kayak biasanya, baik, sopan, jika disapa responnya bagus, dari hal itu saya sebagai petani juga tidak canggung jika memerlukan sesuatu atau membutuhkan bantuan dari penyuluh”.

5. Tangible

The aim of agricultural extension can be achieved if it is supported by several components including extension materials, media, demonstration tools, and models (physical examples), these are all forms of tangible services. The components used in the extension must be based on the problems and needs of farmers [7].

Tools to support counseling in Panca Agung Village, which are used are computers, cameras, LCDs, books, pens, markers, tables, chairs, guest books, and others. There have been innovations presented that have proven benefits, namely the construction of rice field water dams to anticipate dry times, pest control techniques, and the use of superior seeds, this is following what Mr. Rahmat (49 years) said:

“Bukti dari keberhasilan inovasi yang diberikan PPL kepada kami seperti, pembuatan pembendungan air sawah, untuk menampung air jika terjadi musim kemarau karna kita tau air merupakan faktor penting dalam melakukan pertanian, pengendalian hama yang mana itu banyak caranya tergantung jenis hama apa, ini merupakan salah satu inovasi yang sangat bagus bagi kami karna dapat mengedalikan hama dan meningkatkan produksi tanaman kami, menggunakan benih unggul juga sangat penting untuk miningkatkan produktifitas, penggunaan pupuk juga terlihat hasilnya mampu meningkatkan produktifitas tanam kami dan mencegah hama”.

1.2. Level of Farmers' Satisfaction with Extension Service in Panca Agung Village

The level of farmer satisfaction with extension services varies based on factors such as tangible, reliability, alertness, assurance, and empathy. Following are the results of the CSI analysis for the level of farmer satisfaction with extension services in Panca Agung Village.

Table 1. Customer Satisfaction Indeks (CSI)

Parameter	No	Means important score (mis)	Means satisfaction score (mss)	Weighting factor (wf)	Weighted score (ws)
Tangible	A1	4	4	5.95	23.80
	A2	3.69	3.78	5.49	20.75
	A3	4	4	5.95	23.80
Reliability	A4	3.27	3.15	4.86	15.32
	A5	3.52	3.49	5.24	18.28
	A6	3.63	3.7	5.40	19.98
	A7	4	4	5.95	23.80
	A8	4	4	5.95	23.80
<i>Responsiveness</i>	A9	3.76	3.73	5.59	20.86
	A10	3.24	3.4	4.82	16.39
	A11	3.2	3.38	4.76	16.09
<i>Assurance</i>	A12	3.26	3.29	4.85	15.96
	A13	3.81	3.8	5.67	21.54
	A14	3.84	3.7	5.71	21.14
	A15	4	4	5.95	23.80
Empaty	A16	4	4	5.95	23.80
	A17	4	4	5.95	23.80
	A18	4	4	5.95	23.80
	JUMLAH	67.22	67.42	-	-
-	-	-	-	WT	376.72
-	-	-	-	CSI	75.34

Source: Processed Data (2021)

Based on Table 1, farmer satisfaction was obtained by 75.34%. This value is in the range of $60\% < \text{CSI} \leq 80\%$ in the category of satisfaction with the service or role carried out and given by extension workers to farmers in Panca Agung Village, Tanjung Palas Utara District. This is in line with the results of Alam's research [5], the level of farmer satisfaction with field performance in Babakan Karet Village, Garut Regency, is in the satisfied category, this can be seen from the CSI value of 74.03%.

CONCLUSION

1. Farmers' responses to service attributes include:
 - a. extension agents are reliable in helping solve the problems of farmers.
 - b. Swift in responding to complaints and easy to find.
 - c. Provide guarantees for the success of innovations provided
 - d. Have empathy, concern, a good attitude, use polite language, and be easy to understand.
 - e. Proving the truth of the innovation delivered.
2. The level of satisfaction of rice farmers with agricultural extension workers in Panca Agung Village is included in the satisfied category with a CSI value of 75.34%. This value is in the range of $60\% < \text{CSI} \leq 80\%$.

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REFERENCES

- [1] Suryana, N. K., & Ningsih, D. S. (2018). Peran Penyuluh Pertanian Dalam Pemberdayaan Kelompok Tani (Studi Kasus Kelompok Tani Subur Di Desa Karang Agung Kabupaten Bulungan). *Jurnal Borneo Humaniora*, 1(1), 01-06.
- [2] Anwas, O. M. (2011). Kompetensi penyuluh Pertanian dalam memberdayakan petani. *Jurnal Matematika Sains dan Teknologi*, 12(1), 46-55.
- [3] Suryana, N. K. (2021). Analisis Kepuasan Kerja dan Produktivitas Penyuluh Pertanian di Kecamatan Lumbis Kabupaten Nunukan. *Jurnal agrosainta: Widyaiswara Mandiri Membangun Bangsa*, 5(2), 55-61.
- [4] Winartha M 2006 Metodologi Penelitian Sosial Ekonomi. Yogyakarta: Andi Ofsset.
- [5] Alam, A. S., & Velayati, M. (2020). Tingkat Kepuasan Petani Padi Pandanwangi Terhadap Kinerja Penyuluh Lapangan di Desa Babakankaret Kecamatan Cianjur Kabupaten Cianjur. *AGROSCIENCE*, 10(1), 84-108.
- [6] Subagio, Dini Bayu. 2010. Tingkat Kepuasan Petani Terhadap Kinerja Pelayanan Penyuluh Pertanian Di Desa Situ Udik Kecamatan Cibungbulang Kabupaten Bogor Jawa Barat. Skripsi. Departemen Agribisnis Fakultas Ekonomi dan Manajemen Institut Pertanian Bogor.
- [7] Suryana, N. K., Hendris, H., & Sirdawati, S. (2023). Strategi Pengembangan Media Penyuluhan Pertanian Berbasis Hybrid Pada

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