

## COMPETENCY ANALYSIS OF EXTENSION OFFICERS IN AGRICULTURAL EXTENSION ACTIVITIES IN BANDA BARO SUB-DISTRICT, ACEH UTARA

<sup>1</sup>Martina, <sup>2</sup>Zuriani, <sup>3</sup>Hafni Zahara, <sup>4</sup>Cut Maulani, <sup>5</sup>Vina Rezeki

Malikussaleh University

Aceh Utara, Aceh

E-mail: [martina@unimal.ac.id](mailto:martina@unimal.ac.id), [zuriani@unimal.ac.id](mailto:zuriani@unimal.ac.id), [hafni.zahara@unimal.ac.id](mailto:hafni.zahara@unimal.ac.id)

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### Abstract

The number of agricultural extension workers in Aceh Utara based on each sub-district is 279 people. Banda Baro sub-district is the sub-district that has the least number of extension workers among other sub-districts, namely 4 civil servants and 1 self-help extension with the target area consisting of 9 villages. The limited number of extension workers makes it difficult for extension workers to meet extension workers directly and the difficulty of communication networks so that it affects the competence of extension workers in extension activities. This study aims to analyze the competence of extension workers in agricultural extension activities in Banda Baro Sub-District, Aceh Utara. The number of research samples was 105 farmers and the types of data used were primary and secondary data. The data were analyzed descriptively qualitatively which was measured using a Likert scale. The results showed that the average competency of the instructor in extension activities was in the competent category with an index of 77.89%, meaning that the extension worker had good competence in communicating with farmers, planning programs, implementing programs, using methods, building an entrepreneurial spirit, building networking, and evaluating programs

*Keywords: Competence, Extension, Extension, Agriculture*

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### 1. INTRODUCTION

Agricultural extension as an integral part of agricultural development is one of the efforts to empower farmers and other agricultural business actors to increase their productivity, income and welfare. (Berlian, 2014). The Agricultural, Fisheries and Forestry Extension System according to Law Number 16 of 2006 states that extension is a learning process for the main actors and business actors so that they are willing and able to help and organize themselves in accessing market information, technology, capital, and other resources. as an effort to increase productivity, business efficiency, income, and welfare, as well as increased awareness in the preservation of environmental functions

Extension workers carry out their duties and functions, firstly they should arrange extension programs as operational references so that extension services can be carried out effectively and efficiently. One of the activities in the extension program is to make visits to increase capacity and provide assistance to key players and business actors (Zulfikar et al, 2018). Over time, it appears that the current outreach activities are not running as expected. The lack of agricultural extension workers, the number of agricultural extension tasks is not comparable to the managerial competence of the extension workers who have not been able to advance farmer groups such as developing leadership, entrepreneurship, and farmer managerial abilities. Despite the limitations and shortages of extension workers, good agricultural instructor competencies are a dream for the success of agricultural development in Indonesia.

The number of agricultural extension workers in Aceh UtaraRegency based on each sub-district is 279 people. Banda Baro sub-district is a sub-district that has the least number of extension workers among other sub-districts, namely 4 civil servants and 1 self-help extension with the target area consisting of 9 villages. The activities carried out are holding training every two weeks for PPLs and carrying out coaching or supervision to each extension work area with a new system based on a regular and continuous visit schedule (Agricultural Extension Center, 2020).

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Banda Baro District is one of the sub-districts in Aceh Utarawhere the majority of the people work as farmers. In Banda Baro District, there are nine gampongs with a fairly large number of poor people, namely 1.

In carrying out their duties, agricultural extension workers in Banda Baro Sub-district cannot be separated from the perceived obstacles such as the difficulty of holding direct meetings with farmers, the limited number of extension workers, the difficulty of accessing transportation to the location and the difficulty of communication networks. In addition, the obstacle felt by the instructor comes from the personality of the instructor, namely the lack of competence or ability of the instructor.

Based on this description, the purpose of this research is to analyze the Competence of Extension Officers in Agricultural Extension Activities in Banda Baro District, Aceh UtaraRegency.

## 2.LITERATURE REVIEW

Agricultural extension competencies can be defined as the internal capabilities or potentials that exist within the extension workers in line with the role that must be played by each extension worker (Berlo, 1960 in Bahua, 2015)) stated that the competencies that must be possessed by an extension worker include: 1) Communicating Ability, is the ability and skill of the extension worker to empathize and interact with the target community. 2) The attitude of the extension worker in the community: Lives and is proud of his profession, feels that his presence to carry out the task is needed by the target community and believes that the innovation that has been submitted has been tested for its usefulness, has a chance of success to be applied to the natural conditions of the working area, provides benefits and does not conflict with the socio-cultural values of the local community, and believe that the innovations conveyed really represent the real needs of the target community, always ready to provide assistance and or carry out activities for the sake of ongoing changes in farming and changes in the lives of the target community. 3) The ability of the knowledge and expertise of the extension agent regarding: the content, functions, benefits, and values contained in the innovation delivered, the background and conditions of the target, both concerning behavior, socio-cultural values, natural conditions, and needs Real things that society needs and everything that often causes people to like or not want change, as well as everything that causes people to often quickly/slowly adopt innovations. 4) Socio-cultural characteristics of the instructor. The competence of the instructor also includes the state of the socio-cultural background (language, religion,

## 3.IMPLEMENTATION METHOD

This research was conducted in Banda Baro District, Aceh Utara. The population in this study were all farmers in Banda Baro District, amounting to 2,241 farmers (BPS Banda Baro District, 2020). Due to the large number and homogeneous nature of the sample, 105 farmers were considered to be representative in this study (Hair JF, 2010) and sample selection was carried out using the Accidental Sampling technique, namely anyone who was met and found at the research location and was suitable as a data source (Sugiyono, 2017).

The type of data used in this study is primary data obtained from observations and interviews (interview guidelines in the form of questionnaires) with farmers and agricultural extension workers, and secondary data obtained from literature studies, the internet, and related agencies such as the Aceh Agriculture and Food Security Service. North, BPS and Agricultural Extension Center (BPP) Banda Baro District

The data collected in this study will be processed using qualitative descriptive data analysis measured using a Likert scale. The scale used to measure the competence of agricultural instructors in agricultural extension activities with 4 (four) choices of Likert scale with score format and

categories: Score 1 (disagree), Score 2 (disagree), Score 3 (agree), and Score 4 (strongly agree). For the total score of each question asked using the following formula (Natsir, 2013):

$$\text{Total Score} = T \times P_n$$

Where:

T = Number of respondents who chose  $\times$  number of questions

P<sub>n</sub> = Choice of score numbers *likert*

Furthermore, to get the results of the interpretation, it is necessary to know the highest score (Y) and the lowest number (X) for the assessment item with the following formula:

Y = highest score *likert*  $\times$  number of respondents  $\times$  number of questions

X = lowest score *likert*  $\times$  number of respondents  $\times$  number of questions

Then the assessment of the interpretation of the competence of agricultural instructors in empowering farmers and the level of farmer empowerment is the % index value with the following formula:

$$\text{Index value \%} = \text{Total Score} / Y \times 100$$

To find out the location of the index value, first know the interval or distance and interpretation of the percent by the method of finding the percent score interval (I) as follows:

$$I = \text{Range (Highest Index-Lowest Index)} / \text{total score (likert)}$$

$$I = 75 / 4$$

$$= 18.75.$$

In this study, the score interpretation criteria for farmers' perceptions of competence, the role of agricultural extension workers, and farmer empowerment were based on the following intervals:

25%	-	43.74%	=	Incompetent
43.75%	-	62.30%	=	Less Competent
62.31%	-	81.24%	=	Competent
81.25%	-	100%	=	Very Competent

## 4.RESULTS AND DISCUSSION

### Agricultural Extension Competency Analysis in Agricultural Extension Activities

Extension competence is the level of ability possessed by an instructor in carrying out agricultural extension activities in Banda Baro District, Aceh Utara Regency. The competence of extension workers can be seen from several variables including: communication competence, competence in planning programs, competence in program implementation, competence in using extension methods, competence in building the entrepreneurial spirit of farmers, competence in building networking for farmers, and competence in evaluating agricultural extension programs.

In measuring the competence of agricultural instructors, it is seen based on farmers' perceptions. The results of the analysis can be seen in the following table:

Table 1. Competence of Extension Officers in Banda Baro District, Aceh Utara Regency

No.	Extension Competence	Index Value (%)	Category
(1)	(2)	(3)	(4)
1	Communication	79.79	Competent
2	Planning Program	75.71	Competent
3	Implementing the Program	76,70	Competent
4	Using the Extension Method	77.86	Competent
5	Building an Entrepreneurial Spirit	79.22	Competent
6	Building Networking	78.41	Competent
7	Evaluating Programs	77.41	Competent
	<b>Average</b>	<b>77.89</b>	<b>Competent</b>

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Source: Primary Data (Processed, 2022)

Based on Table 1, it can be seen that the average competence of agricultural instructors in agricultural extension activities according to farmers is in the competent category with an index value of 77.89%. The explanation for each variable of agricultural instructor competence can be seen as follows:

#### 4.1. Extension Communication Competence

Communication skills are the ability of extension workers to convey messages related to agricultural innovation to targeted farmers. Extension workers act as communicators in conveying innovation messages to farmers. The implementation of quality agricultural extension can be done with the communication competence possessed by the personal extension worker.

Based on table 1, it can be seen that the communication competence of the extension worker in carrying out extension activities is in the capable category with an index value of 79.79%, meaning that the competence of the extension worker in communicating in carrying out extension activities based on farmers' perceptions is competent. According to the farmers, the extension workers are able to communicate well, such as the suitability of the language used by the extension workers and the farmers, how to convey a good message without forcing farmers to apply it.

Extension workers as communicators have become an obligation in carrying out extension activities to be able to be honest, brave and consistent in conveying agricultural innovation messages. Extension workers in carrying out their duties communicate with farmers in two ways, namely direct and indirect communication. Direct communication is carried out by the extension workers at the Banda Baro Spectacle through regular group meetings which are held once a week. Farmers can directly convey the things they want, such as increasing farm production. An extension worker must be able to provide solutions for farmers on how efforts must be made to increase the production of agricultural products by farmers. Direct communication is also carried out by extension workers through visits to farmers' houses, by making an appointment with the extension worker in advance and meeting directly at the farmer's house, the extension worker can do it without neglecting other activities.

In addition to direct communication, extension workers also convey agricultural innovation messages indirectly, meaning that extension workers do not directly convey agricultural innovation messages to farmers but through intermediaries or media. For example, a message is conveyed to farmers via the internet, then the information is conveyed to the head of the farmer group and then distributed to the farmers.

Communication carried out by extension workers in Banda Baro District is also done orally and in writing. Orally, the example was delivered by the extension worker when carrying out a demonstration of the *jajar legowo* rice farming plot. Communication in the extension was carried out in the pilot area where an extension worker immediately did the practice while explaining how to plant properly so that the roots of the rice plant could grow and develop properly and set the spacing on the *legowo* row. Even though the innovation message is conveyed orally, farmers can see and hear directly the practices carried out by the extension workers so that all target farmers understand what the extension workers are saying, although not all farmers are able to implement it.

Communication that is delivered in writing is when the instructor's weekly routine visit is carried out at the home of the head of the farmer group or members of the farmer group who are willing to hold meetings at his home. Of course, before the extension, the extension worker was prepared with the material to be delivered in the meeting. For example, material on seed sorting methods, making organic fertilizers or a good fertilizer schedule. After presenting the material, the next discussion session was held. In the discussion, the extension worker gave the opportunity to the farmer to explain all the problems and concerns felt by the farmer. Extension workers provide responses through solutions in overcoming problems felt by farmers.



## 4.2. Competency in Planning Extension Programs

Every agricultural instructor must be able to plan extension programs so that the extension activities to be carried out are more focused and effective in solving farmers' problems as targets. Program planning is the ability of the extension worker to plan extension activities that describe the current situation, the goals to be achieved, the problems in achieving the goals and the best alternative for solving problems in their respective extension work areas (Wahyuni et al, 2015)

Based on the results of the research, the competence of the instructor in planning the extension program in Banda Baro District is in the good category with an index value of 75.71%, meaning that the farmer's assessment of the ability of the extension worker in planning the program is competent. Based on a field survey, extension workers in Banda Baro Sub-district have a guidebook for the Extension Annual Activity Plan (RKTP) for 2022 which of course every program contained therein must be carried out by the extension worker.

The results of the farmer's assessment of the ability of the extension workers are good, but the extension workers are not yet fully able to plan the program properly. Sometimes the extension workers find that the problems faced by farmers are not stated in the RKTP guidebook owned by the extension workers, but as an extension worker, they must still be able to identify the needs of farmers that must be solved even though they are not part of the program in the RKTP. Bahua (2015), stated that program planning or agricultural extension programs were formulated by many parties, namely extension workers together with the target community, supported by specialists, practitioners and policy makers related to local community development efforts.

In the preparation of a good extension program planning, various data are contained in the agricultural extension work area such as resource data covering natural resources in the form of climatic conditions, soil quality, suitability of location conditions for commodity selection, water adequacy, then also farmer resources including farmer characteristics such as education level, land area owned by farmers. The available capital resources in the agricultural extension work area can be in the form of group savings, cooperatives, or the availability of financial institutions that can be a source of capital for farmers.

The ability of the extension worker in planning the extension program is seen from the ability to identify actual data in the form of actual data experienced by farmers such as the number of productions, pests and diseases that attack plants, the number of farmer groups and others. And potential in the form of data that may be achieved by farmers such as increasing the amount of production, increasing the number of farmer groups, reducing and eradicating pests and diseases in plants. The two data need to be compared by the instructor to plan the program to be implemented and later also used to formulate the objectives of the program implementation. Each data contained in the RKTP is actual data based on the conditions and needs of farmers.

The competence of the instructor in planning the program is not only in determining the program to be implemented but also in determining the location, time of implementation, the amount of funding sources that will be used in program implementation. The selection of extension methods must also be appropriate and the forms of extension methods that are often used by extension workers in Banda Baro District are field visits, demonstration plots, and field schools. Extension media are also an important element in extension activities so that the selection of media must also be media that can convey messages about agricultural innovations effectively such as assistive devices in the form of infocus, laptops, real objects used in extension activities as pilots.

## 4.3. Competence in Implementing Extension Programs

The extension program carried out by the extension worker in the working area must be based on the RKTP that has been formulated. The farmer's assessment of the competence of the instructor in implementing the program is in the competent category with an index of 76.70%. The implementation of the program is carried out well because it is a mandatory task that must be carried out by extension workers in the field. Farmer assessments are facts that are felt by farmers when the extension worker assists the farmer in the implementation of the extension.

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The implementation of the extension program involves farmers as the target. Extension workers have the ability to influence farmers by convincing farmers that every innovation that is socialized by extension workers can be proven true. The way to convince farmers is of course with various activities carried out by extension workers in developing farmer-owned farms. According to Hanafiah et al (2013), competent extension workers in the aspect of extension implementation will be able to develop farmer institutions well. This condition spurs higher interaction with farmers, so that by itself the frequency of extension visits will increase.

Various forms of programs carried out by agricultural extension workers in Banda Baro District include the practice of making vegetable pesticides from soursop leaves which are insecticidal or toxic to insects, which can act as repellents and appetite inhibitors, especially for pests. For rice and horticulture commodities, this vegetable pesticide has been used by farmers in Banda Baro District. Furthermore, there is a yard utilization program, catfish cultivation with a biofloc system, analyzing the nutrient elements of paddy fields using PUTS, SL jajar legowo program, programs for peanut cultivation such as the use of high-yielding seeds and setting spacing of peanuts, programs to increase the number of farmer groups, and also programs for cattle farming such as good cage sanitation for cattle, cultivation of hybrid corn, shallots, the SL-IPM program on lowland rice, and others.

The implementation of the program is carried out with guidance by extension workers using various methods such as visits, business meetings, training, demonstration plots, and field schools. The collaboration of these various methods is a form of effort so that farmers not only know but are also willing and able to apply them to the farmer's farm. Despite the fact, not all target farmers are willing to implement it. However, as an instructor, various extension programs must be carried out using various methods and media such as OHP, films, slides, videos, real objects as examples, providing the necessary tools and materials aimed at motivating farmers to learn, training farmers' skills, and creating an atmosphere. effective learning.

#### **4.4. Competence in Using Extension Methods**

Agricultural extension is a service system for farmers to improve their life empowerment. Various techniques and methods used by extension workers are educational, guiding and implementing so that farmers are able to help themselves, improve their level of thinking, work capacity, and level of equality of life (Martina & Praza, 2020).

The instructor's competence in using the right extension method got an index value of 77.86% in the competent category. This means that according to farmers, the competence of extension workers in using extension methods in Banda Baro Sub-District is competent, because extension workers do not only use one type of method, but there are various extension methods used in Banda Baro Sub-District.

The implementation of visits by extension workers to regular farmers every week is one form of the method carried out, the method of visiting both farms and group meetings at a farmer group member's house. The instructors' routine visits to their fostered farmer groups are well prepared in advance by the extension workers, such as the purpose of the extension, the materials and media for the extension when conducting the visit method. In carrying out the visit, all the material that will be delivered by the instructor is studied and understood in advance and the presentation of the material during the implementation uses the right media. Like the method of sorting quality rice seeds, At the time of the visit, the extension group would bring superior rice seeds as a pilot and then the extension staff could provide other tools and materials or provide members of the farmer group with these materials and tools, such as a container, water, and salt. It is enough to soak the seeds in a salt solution and then see if there are seeds that float, meaning that the seeds are not good for planting because they cannot grow, then those that do not float are good seeds to plant.

The method of visiting with materials on the cultivation of tomatoes and chilies and how to control pests and diseases in plants is carried out by extension workers at the location of the farm.

The extension worker presents the extension material by using several posters containing the material presented, because the learning situation is outside the room so the extension worker must use loudspeakers so that all farmers can hear what the extension worker is saying. Extension workers deliver counseling materials directly without using print media or electronic media. The results of the research conducted by Putri et al (2022), the results of the analysis of farmers' assessments of the preparation of agricultural extension materials were dominated by disagreeing answers. This means that in the provision of extension materials in the research area generally do not use any media, both print and electronic media. Agricultural instructors in carrying out counseling in Banda Baro District are carried out outdoors, this aims at outreach activities to determine the direct conditions of the farmers' business conditions, a cooler learning atmosphere, and when carried out during the day when farmers are in their respective business locations, so it is not difficult to collect farmer. Opinion (Heru, 2015) which states that "The choice of an extension agent towards a method depends on the specific objectives and working situation.

The Field School (SL) method is also carried out by agricultural extension workers in Banda Baro District on lowland rice farming which is carried out during the current planting season between July and October. The implementation starts from measuring soil PH for lowland rice, selecting superior seeds to be planted, processing soil, seeding, planting, giving balanced fertilizers, integrated pest control, harvesting, and marketing the products. Field School activities are carried out by rice farmer groups in Gampong Cot Jabet and Blang Pala.

Various methods of extension used by extension workers aim to make extension activities more effective. However, in practice not all farmers who are members of farmer groups can participate. Based on information from the extension worker, only about 60% of the farmers were able to attend the extension activity due to various reasons such as the farmers' other busyness at the same time as the extension schedule, the material presented by the extension worker was deemed not too important for farmers and others.

#### **4.5. Competence Awakening the Entrepreneurial Spirit of Farmers**

Generating and developing the entrepreneurial spirit of farmers is important to do in order to increase farmer empowerment. So far, farmers are only limited to on-farm activities and the entrepreneurial spirit for farmers has not been taken into account. Economic empowerment of farmers through extension activities needs to be done to change the perspective of agricultural development.

Competence in generating the entrepreneurial spirit of farmers in Bandaro Sub-District obtained an index of 79.22% in the good category, meaning that farmers' perceptions of the competence of extension workers in generating the entrepreneurial spirit of farmers were classified as good. This is shown by extension workers who carry out their roles as mentors, organizers/dynamizers, technicians, and liaisons for research institutions and appropriate technology.

The entrepreneurial spirit of farmers is known by extension workers based on the creativity of farmers to develop and expand their farming. In every farmer there is an entrepreneurial spirit, but in its application not all farmers are enthusiastic in expanding their farming because of various obstacles including the narrow land owned by farmers and even farmers who do not have land and must be rented, besides that the capital owned by farmers is also limited. farmers to plant new commodities, most farmers are reluctant to plant them because farmers are still afraid to take risks. Based on the results of research conducted by Manyamsari and Mujiburrahmad (2014), it shows that farmers are still not brave enough to take risks in planting new commodities that no one has planted yet.

The role of the extension worker as a liaison is very important and the efforts made by the extension worker in generating the entrepreneurial spirit of farmers are through the involvement of farmers in farmer groups. Extension workers can provide assistance to farmers through farmer groups and as a condition for obtaining capital assistance from the government. Extension workers assist farmers in preparing Member Business Plans (RUA) and Farmer Group Definitive Plans

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(RDKK) which will be proposed for assistance. Most of the assistance obtained by farmers is assistance for agricultural production facilities (Saprotan) in the form of superior seeds, medicines and fertilizers. This assistance can be used as initial capital for farmers to develop their farms.

Assistance activities in an effort to awaken the entrepreneurial spirit of farmers carried out by extension workers are in order to motivate farmers in developing technical capabilities of farmers in implementing new technological innovations in their farming activities, motivating farmers to be committed to achieving the goals set together, motivating, facilitating and influencing farmers to make changes. towards a better direction such as increasing the amount of production and improving the quality of production, guiding farmers in making decisions such as decisions in implementing agricultural innovations, facilitating and motivating farmers to monitor and evaluate farming activities carried out and arrange further activities, improve farmers' social abilities, and improve farmers' ability to manage conflicts that occur in farming.

#### **4.6. Competence in Building Networking**

Extension efforts in building networking is to establish farmer business partnerships. The business partnership in question is a mutually beneficial business collaboration between farmers and companies that become farmers' partners accompanied by coaching and development as well as mutual need, benefit and strengthening (Rahmawati et al, 2020).

The results showed that the instructor's competence in building networking obtained an index of 78.41% with the competent category, meaning that according to the farmer's perception, the extension's ability to build networking for farmers was competent. This is evidenced by the cooperation of farmer-entrepreneurs in the upstream agribusiness system, namely the providers of agricultural products such as seeds, medicines, and fertilizers. Government assistance for farmer groups is not always available every planting season, so farmers must be able to work together with agricultural food suppliers. Farmers are always constrained by the initial capital to start their farming business; this is usually experienced by farmers considering that farmers do not have good bookkeeping in their farming and farming capital is often mixed with household needs.

Based on the condition of farmers, extension workers assist farmers in establishing partnerships with providers of agricultural production facilities. The cooperation can be in the form of a cooperation contract. Agricultural production facilities such as seeds, fertilizers, and medicines are borrowed by farmers to providers of production facilities with payment made after harvest. These conditions can be mutually beneficial where the provider of agricultural production facilities has regular customers and farmers benefit from the availability of agricultural production facilities in developing their farming.

In the downstream agribusiness subsystem, extension workers assist farmers in building networking with marketing institutions such as partnerships with traders. The collectors proposed by the extension agents in the cooperation are reliable collectors and have high bargaining prices and do not harm farmers. Farmers do not have to bother anymore to deliver their harvest to the collectors, but the traders who directly pick up the location of the farm at harvest time. The advantages obtained from this collaboration are that there is no concern for farmers whose crops are not sold, and the availability of products is continuous for collectors.

Networking of farmers with other service institutions such as banks and cooperatives has not been carried out properly, because the terms and procedures for obtaining capital from the banking sector are considered complicated for farmers and cooperatives in the village do not yet exist. So that cooperation with financial institutions is still very limited and non-existent.

#### **4.7. Competence in Evaluating Extension Programs**

Evaluation of agricultural extension programs is a systematic process to obtain relevant information about the extent to which the objectives of agricultural extension programs in the extension work area can be achieved so that conclusions can be drawn, then used to make decisions and considerations on the extension programs carried out. Every extension program implemented must be evaluated by the extension worker. The program evaluation aims to assess the programs



that have been implemented, whether there is a change in the knowledge, attitudes, and skills of farmers. Based on the results of the study, the competence of the extension worker in implementing the program evaluation obtained an index value of 77.41% with the competent category, meaning that the assessment of the farmer on the ability of the extension worker in evaluating the extension program was competent.

The method of implementing the program evaluation carried out by the extension worker in Banda Baro District includes the identification of areas, making proposals for extension evaluation activities, making evaluation instruments, data collection, data analysis, and making extension evaluation reports. The results of the program evaluation are presented again in the extension's annual program plan to compare the results obtained with the targeted program for the following year. In evaluating the extension program in Banda Baro District, the extension worker uses an evaluation instrument in the form of an evaluation grid for the implementation of extension by measuring changes in the cognitive and psychomotor aspects of farmers. However, in practice, not all farmers can be evaluated by extension workers due to several obstacles faced by extension workers including the large number of farmer groups that are fostered so that they have limited time to evaluate. Evaluation activities carried out by extension workers only used a few samples from farmers who were considered representative.

Based on the field survey, the extension worker evaluates the extension program by examining evidence on the learning process activities such as evidence of attendance, activity, and participants' understanding of the material being studied, then also based on the level of application of the innovation conveyed by the instructor. In the implementation of training activities such as training in making compost, vegetable pesticides, and sorting seeds, evaluations are carried out based on the ability of farmers to practice these innovations. Each evaluation activity is detailed in the form of an evaluation report, and this report can be used as a reference in preparing proposals for the following year's program proposals.

## 5. CONCLUSION

Based on the results of the research that has been carried out, it can be concluded that the overall competency assessment of extension workers in agricultural extension activities is in the competent category with an index value of 77.89%, with details, communication competence is 79.79% in the competent category, program planning competence is 75.71% in the competent category, competence in implementing programs is 76.70% in the competent category, competence in using counseling methods is 77.86% in the competent category, competence building an entrepreneurial spirit by 79.22% in the competent category, competence in building networking by 78.41% in the competent category, and competence in evaluating programs by 77.41% in the competent category.

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## REFERENCE

- Asriadi AA, Husain N, & Rahmawati. (2020). Networking Model for Improving the Competitiveness of Porang Bulbs Agribusiness in Pattalassang District, Gowa Regency. *Journal of Agribusiness and Agroetourism*, 9(3), 258-277.
- Bahua, MI (2015). *Extension and Empowerment of Indonesian Farmers*. Ideas Publishing.

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- Berlian, M. (2014). The Role of Field Agricultural Extension and Farmer Participation in the Feati Program and Its Effect on Farmers' Income in Banyuasin III District, Banyuasin Regency. *Journal of Mathematics, Saints, And Technology*, 15(1), 52–62.
- Hair JF, Anderson RE, Tatham RL, and Black WC. 2010. *Multivariate Data Analysis with reading* Seventh Edition. (New Jersey: Practice Hall Inc.).
- Hanafiah MA, Rasyid W, & Purwoko A. (2013). The Relationship between Characteristics, Motivation, and Competence on the Work Productivity of Agricultural Extension Officers in Bengkulu City. *Journal of AGRISEP*, 13(1), 69-84.
- Heru, P. (2015). Potential Development of Beef Cattle Farm in Tanjung Bintang District, South Lampung Regency. *Integrated Animal Husbandry Scientific Journal*, 3(4).
- Manyamsari I & Mujiburrahmad. (2014). Characteristics of Farmers and Their Relationship with Competence of Small Farmers. *Journal of AGRISEP*, 15(2), 58-74.
- Martina & Praza, R. (2020). Identification of the Implementation of Agricultural Extension Methods on Rice Paddy Farmers in Dewantara District, Aceh Utara Regency. *Journal of Agrifo*, 5(1), 1–12.
- Maulina S, Yulida R, & Cepriadi. (2015). Agricultural Extension Professional Competency Level in Kampar District, Kampar Regency. *Journal of Jom Faperta*, 2(1).
- Natsir F M. (2013). How to Calculate Likert Scale. Article
- Putri MA, Veronice, & Ananda G. (2022). Farmers' Perceptions of Agricultural Extension Competencies in Payakumbuh District, Fifty Cities District. *Extension Journal*, 18(1), 59-74.
- Sugiyono. 2017. *Quantitative, Qualitative, and R&D Research Methods*. Alfabeta Publisher. Bandung.
- Wahyuni N, Rosnita, & Yulida R. (2015). Agricultural Extension Professional Competency Level in Tambang District, Kampar Regency. *Journal of Jom Faperta*, 2(1), 1-15.
- Yadanto H. (2009). Thesis: The Relationship Between Mainstreaming Children in the Learning Process with the Realization of Child Friendly Schools. UNS Surakarta.
- Zulfikar, Amanah S, & Asngari PS (2018). Farmers' Perceptions of the Competence of Food Crops Agricultural Instructors in Aceh Utara District. *Journal of Extension Science*, 14(1), 159-174. <https://doi.org/10.25015/0enyuluhan.v14i1.17556>