

Strategic Role of Agricultural Extension Apparatus in the Development of Independent Village-Based Agricultural Business

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Abstract. *This study was conducted with the aim of analyzing and tracing the strategic roles implemented by Agricultural Extension officers in the development of agribusiness, which is expected to further increase village independence in building the economy through the agricultural sector, which in turn can further improve the welfare of farmers and their families. The research method used is descriptive qualitative, with respondents being agricultural extension officers, Village Heads, farmer group administrators, and female farmers, who were determined by purposive sampling and snowball sampling. Data were collected through in-depth interviews, observations, and literature studies. From the results of the study, several things were found, namely Agricultural products, especially paddy fields, are not optimal due to the unavailability of technical irrigation that is able to meet the water needs of farmers. In addition, the production produced by the community is still oriented towards household consumption. Agribusiness development needs to be directed towards market orientation and profit.*

Keywords: *Strategic Role, Agricultural Extension Worker, Independent Village Development, Village-Based Agricultural Enterprises*

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INTRODUCTION

Agricultural Extension Officers are human resources in agricultural development in Indonesia who are at the forefront (Amanah et al., 2020). Align with research from Intyas (2022), through strategic roles carried out directly in the field for the advancement of the agricultural sector, which is one of the mainstays for building an economy based on agricultural resources in most parts of this republic, which is known as an agricultural and maritime country. Indonesian agricultural development, which has strengthened the structure of economic development for decades, must continue to improve in line with the era of globalization, in order to be able to compete in international free trade, especially the trade of various agricultural products from tropical countries, which not only emphasizes quantity, but also on quality and continuity (Manan, 2014). This can be achieved through a modern strategy of strengthening agricultural human resources, and improving and strengthening its system, from upstream to downstream, namely an agribusiness system based on regional potential (Asmy, 2024).

According to Ozili, (2021) the nation's economic development strategy that was less than ideal in the past, coupled with the prolonged economic crisis exacerbated by the emergence of the Covid-19 pandemic, has caused various economic problems for the Indonesian nation. Starting from the problems of poverty, unemployment, economic inequality, food insecurity, natural resource depletion that causes environmental degradation and others, are a series of

problems that disrupt the Indonesian economy. In overcoming these various problems, the economic development strategy should be aligned with the various potentials of a region, as well as consumer needs both on a local, regional, national, and international market scale (Gerlitz et al., 2021). For this reason, agricultural extension programs are needed based on natural resources that have economic value in order to increase the economic growth of the community (Jie et al., 2023).

Various problems in agricultural extension activities faced by agricultural extension workers are influenced by factors of ability, skills, competence, work experience, motivation, appreciation, attitude, and organizational institutions, both internal and external (Aregaw, 2023). According to Kaiser & Barstow, (2021), other problems faced are the number of extension workers who are still limited, the long distance between the place of residence and the work area, minimal infrastructure, and limited supporting facilities for extension. Align with research from Rangga, (2020) stated that the quality of Human Resources (HR), especially Agricultural Extension Workers who are the main actors, and farmers as targets, are two main supporting elements for the success of agricultural development, because to achieve a goal, HR is the driving force and synergy of other resources.

One of the regencies in South Sulawesi Province that has quite large agricultural potential in supporting its economy is Takalar Regency. During the 2019-2021 period, the rice harvest area in Takalar Regency fluctuated from year to year. In aggregate, the harvest area in Takalar Regency in 2019 reached 26.08 thousand hectares and increased to 27.67 thousand hectares (6.10 percent) in 2020. However, in 2021 the rice harvest area in Takalar Regency decreased to 27.55 thousand hectares (-0.44 percent). Rice production in Takalar Regency from 2019 to 2021 has always decreased. This decline in production value cannot be separated from the phenomenon of declining rice productivity figures over the past three years.

This problem is certainly inseparable from the increasing conversion of agricultural land, especially rice and corn commodity areas to develop other sectors such as property and others (Sondakh et al., 2023) to overcome this problem, the implementation of the agribusiness system must continue to be developed, from upstream to downstream. Based on these secondary data, the strategic role of Agricultural Extension Workers in the development of agribusiness in Takalar Regency is an important element to be studied, especially in relation to the steps implemented in increasing the productivity of rice and secondary crops and fisheries as a source of food for the community.

According to Assagaf, (2020) agribusiness activities are activities based on the advantages of natural resources (on farm agribusiness) with the application of technology and human resources for obtaining added value (off-farm agribusiness). In addition, agribusiness activities have a wide spectrum, from small business scale, household to giant business scale (Adobor, 2020). So that efforts to accelerate the growth of the agribusiness sector with weak farmer conditions (limited capital, skills, knowledge and land control) can be achieved through the application of an agribusiness development system. Thus, the development of an agribusiness system is a form (model, system, pattern) that can provide benefits for agribusiness actors (farmers, livestock breeders, planters, fishermen, small and medium entrepreneurs/cooperatives), in the form of increased income, increased added value and expanded employment opportunities (Sari et al., 2024).

When viewed based on the number of poor people, according to the 2020 South Sulawesi Province Poverty Data and Information, Takalar Regency is the regency with the eleventh smallest number of poor people compared to other regencies/cities in South Sulawesi Province. Likewise, when viewed based on the percentage of poor people, compared to all regencies/cities in South Sulawesi Province, Takalar Regency is the regency with the eleventh smallest percentage of poor people in South Sulawesi Province. In 2019, rice production in Takalar Regency reached 113.19 thousand tons of Dry Milled Grain (GKG) and decreased by -5.1 percent to 106.84 thousand tons of GKG. Rice production decreased again in 2020 to 101.50 thousand tons of GKG.

When compared with the rice production results of all regencies/cities in South Sulawesi, Takalar Regency ranks 16th out of 24 regencies/cities.

METHODS

This study uses a descriptive qualitative approach. This approach was chosen for the reason of describing the strategic role of Agricultural Extension Officers in the development of agribusiness in Tamasaju Village and Pakkabba Village, North Galesong District, Takalar Regency as case villages for the study. Considering that each party understands the research problem, several informants were taken, namely Agricultural Extension Officers, Village Heads, Heads of Farmer Groups, Farmers, Women Farmers, Agricultural Product Business Actors. Data were obtained through in-depth interviews with informants. In addition, data collection was also carried out through observation and documentation. The data obtained were then analyzed by reducing data, displaying data, and verifying/drawing conclusions.

RESULTS AND DISCUSSION

In the two villages where the research was conducted, rice production was not yet optimal, so what needed to be done was to build technical irrigation to irrigate the rice fields, then farmers gradually switched to using organic fertilizers, besides being healthier it also reduces production costs when using pesticide fertilizers and finally there were farm roads that could make it easier for people to transport agricultural products after harvest. Align with research from Dong, (2020) on the other hand, what reduced production results was the increasing conversion of land functions caused by the opening of new areas for residential areas. The result was that the land that could be cultivated for agricultural purposes was getting narrower.

The construction of technical irrigation with water sources from neighboring districts, namely Gowa Regency, South Sulawesi Province, is very important. It is said to be important because it will provide added value for farmers in carrying out their farming efforts. If so far they have only had two harvests a year, with irrigation it can be increased to 3 or 4 harvests. In addition, irrigation can encourage and strengthen farmers to improve the performance of their farming efforts (Rahmanet al., 2024). On the other hand, the use of chemical fertilizers needs to be reduced, besides being difficult to find when farmers need them, the use of chemical fertilizers can also cause the soil to harden. Soil hardening triggers overall soil infertility. Continuous use of chemical fertilizers can cause the soil to lose its porosity. This is because the use of fertilizers increases the acidity levels in the soil (Murnita & Taher, 2021). As is known, hydrochloric acid and sulfuric acid in the soil dissolve soil crumbs that are rich in minerals (Pahalvi et al., 2021). That is why, agricultural extension workers in the North Galesong District provide counseling to farmers to gradually switch to using organic fertilizers.

Align with research from Felinda, (2021) the advantages of organic fertilizers include: environmentally friendly, providers of macro and micro nutrients for plants, functions as a soil divider, improves soil structure, improves soil pore size which will later make water holding capacity and soil aeration better, and can meet energy and food sources. Findings in the field also show that vegetable plants that are included in the type of horticulture that are mainly managed by women, in addition to using non-organic fertilizers, female farmers also use pesticides as an effort to fertilize the growth of their vegetables. Their vegetable plants are kale, spinach, paria, eggplant, papaya, and camangi. According to Arsi, (2022) the purpose of using pesticides on their vegetable plants is to suppress or reduce the population of target pests (pests, diseases, and weeds) to below the economic threshold value, without causing adverse impacts such as: resistance, resurgence, poisoning of staple crops and environmental pollution. In addition, excessive use of pesticides will also cause health problems for people who consume vegetables that have been given pesticides.

The need for irrigation as the main source of water, fertilizers, pesticides and other equipment such as machetes, hoes, pumps, and others as upstream agribusiness subsystems need

to be given attention by the government in order to support the level of agricultural productivity, especially in Galesong Utara District, Takalar Regency. Irrigation is one of the important factors in farming activities in a broad sense. The research findings show that there is no irrigation in Galesong Utara District. The source of water for their agriculture comes from the flow of water from the Gowa Regency irrigation. Therefore, the government remains obliged to assist farmers, especially in technical and financial guidance until they are able to manage it independently. Another finding is that the source of water comes from groundwater that is channeled to their rice fields using water pumps, especially during the long dry season. Providing water, either naturally or artificially to the soil is very necessary in order to provide moisture that is useful for plant growth, as a source of food for the people in Galesong Utara, Takalar Regency, South Sulawesi Province.

Meanwhile, in the downstream agribusiness subsystem, such as the processing of agricultural products such as types of cakes whose raw materials are rice and processed by home industries, it is still very limited. In addition to being caused by insufficient business capital, it is also because their skill levels are still low. Of course, this needs attention from the government in fulfilling the function of community empowerment. Housewives are only able to process very limited harvests on certain types of traditional cakes. When researchers conducted observations in their homes, they found types of traditional cakes as they were. The cakes produced by housewives, although they taste good, do not have packaging, let alone halal certification. The marketing reach is also still difficult to promote, resulting in only a small amount being sold. In fact, it is known that the processed cakes can be an alternative to increase household income, especially when the price of post-harvest grain drops.

Furthermore, something that is no less important to pay attention to is the conversion of land from agricultural land to residential land. With the entry of housing developers into rural areas in North Galesong District, Takalar Regency, the area of agricultural land is under threat. In such a situation, a strong institution is needed related to spatial planning policies in order to maintain sustainable agricultural land. The conversion of agricultural land into settlements results in farmers losing the opportunity to work their land sustainably (Hidayat, 2023). Farmers will not get the benefits of their harvest or agricultural products, either for their own families or for commercial purposes.

Other institutions that are greatly needed by the community in the research location are educational and training institutions as a forum for farmers to increase their knowledge and skills related to agribusiness development (Setiyadi et al., 2022). Farmers' knowledge about how to cultivate land, superior seeds, fertilization, harvesting, and post-harvest really needs to be improved. Likewise, the method of processing agricultural products which is still very limited by farmers in North Galesong is an important reason for the need for such educational and training institutions. Farmers in North Galesong, Takalar Regency sell their rice directly after harvest. There is no post-harvest processing, only a small number of farmers process the rice by drying it for consumption purposes for their families. As a result, the additional benefits from the production results after harvest are very lacking.

CONCLUSION

Agricultural products, especially paddy fields, are not optimal due to the unavailability of technical irrigation that is able to meet the water needs of farmers. In addition, the production produced by the community is still oriented towards household consumption. Agribusiness development needs to be directed towards market orientation and profit. There needs to be institutional support from both financial institutions that can help provide business capital and educational and training institutions as a forum for the community to increase their knowledge and skills in managing harvests.

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