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THE DEVELOPMENT STRATEGY OF PORANG COMMODITIES (*Amorphophallus oncophyllus*) IN MORAMO SUB DISTRICT SOUTH KONAWE REGENCY USING AHP METHOD

Megawati[1*)], Rosmawaty[1)], Muhammad Aswar Limi[1)]

[1]Department of Agribusiness Faculty of Agriculture, University of Halu Oleo
Kampus Hijau Bumi Tridharma Anduonohu Kendari 93232, Indonesia

**Corresponding author*: emega0955@gmail.com

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ABSTRACT

This study aims to find out what criteria affect the development of Porang crop commodities in Moramo Sub District, South Konawe Regency, what alternative strategies can be applied in the development of Porang crop commodities in Moramo Sub District, South Konawe Regency, what strategy priorities can be implemented in the development of Porang plant commodities in Moramo Sub District, South Konawe Regency. The determination of location is determined deliberately. Data collection will be carried out from September 2021 to April 2022. The sampling technique in this study was determined by the Purposive Sampling technique, where sampling resolved specific characteristics that followed the research objectives. The samples in this study were farmers, traders, and government agencies. Data analysis in this study used the AHP method. The results showed that the priority strategies that can be applied to the development of porang crop commodities in Moramo Sub District, South Konawe Regency, namely utilizing government support with a weight value of (0.374), holding counseling activities with a weight value of (0.324), developing resources with a weight value of (0.302).

Keywords: AHP; development strategy; porang

INTRODUCTION

The Porang plant is a type derived from tubers that has considerable potential to be cultivated optimally because it is an export commodity (Utami, 2021). During World War II, porang was exported to Japan, Taiwan, Singapore, and South Korea, but porang cultivation was not very developed. In 1975 the farming of porang plants was revived by the fact that these plants have high economic value and are very profitable because glucomannan can be used as functional food, which has health benefits (Saleh *et al* ., 2015).

Porang also reproduces using tubers and seeds. Porang tubers contain glucomannan which produces carbohydrates and has a high selling value in the medicine, food and beverage, cosmetics, adhesive or glue industries, cotton fabric paint, polishing fabrics, wool, and imitation materials (Apu *et al* ., 2022). The development of porang plants is significant, among other things, because these plants have relatively high economic potential. This will significantly help improve people's standard of living (Rahayuningsih, 2020).

In Southeast Sulawesi, the porang plant is not widely known by the public and is still considered a wild plant, and only a few areas have started cultivating the porang plant. One of the regencies in Southeast Sulawesi that has begun growing porang plants is Moramo Sub District, South Konawe Regency. Based on the results of interviews with porang farmers, it is known that before being cultivated, porang plants were found growing wild on their farmland, and in 2017 porang plants began to be produced in Moramo Sub District, South Konawe Regency, with a production of 5 tons. Furthermore, based on the results of the interviews, it is known that the resulting porang products are

marketed outside the Moramo District area for IDR 5,000-IDR 6,000/kg of porang tubers. The price of porang, considered good by farmers, motivates other farmers in Moramo Sub District, South Konawe Regency, to cultivate porang plants. Currently, some farmers have switched commodities to porang plants due to considerations of the price of porang obtained and the cultivation techniques, which tend to be easy. This is in line with Mundiyah *et al*., (2021) saying that porang plants have become popular in recent years because these plants are easy to cultivate, have high productivity, have relatively few pests or diseases that attack, and increased market demand. However, the problem is that there are still farmers who have problems with porang farming, such as the lack of knowledge of porang cultivation techniques, the provision of inputs owned by farmers is still not optimal, post-harvest handling of porang not been implemented by farmers, institutions that are not functioning correctly and porang marketing which is not widespread enough. So this makes farmers unable to cultivate porang to the fullest.

Research conducted by Fauziyah *et al*., (2013), Rahayuningsih (2020), Mundiyah *et al*., (2021), and Pasaribu *et al*., (2021) conducted research that focused on the development of porang commodity crops using SWOT analysis. The analysis results show that the recommended strategies for developing porang commodities are increasing business scale, improving human resources quality, building partnerships between farmers, counseling, forming cooperatives, and providing capital assistance. Further research conducted by Hamdhan (2020), Rokhmah & Supriadi (2015), and Sukartono *et al*., (2022), namely researching the development of the porang commodity using descriptive qualitative where the results show that to develop the cultivation of the porang thing is necessary to choose a location carefully in its cultivation, pay attention to the growing conditions and climate, and the need for increased investment. The success of its development is determined by several factors, namely, the provision of seeds, land, the need for capital support from the government, and the marketing of porang cultivation products. In this research, the strategy for developing the porang commodity uses the AHP method, which is aimed at making decisions in developing the porang commodity.

The phenomenon in the field shows that there are farmers who have problems with the porang farming being cultivated. Criteria, alternatives, and priority strategies are needed, especially regarding the readiness of the ongoing agribusiness subsystem. So the researcher aims to examine the requirements for the development of the porang commodity, alternative strategies that can be applied, and priority strategies to be used in the development of the porang thing in Moramo Sub District, South Konawe Regency, using the AHP method

MATERIALS AND METHODS

The research location will be in Moramo Sub District, South Konawe Regency. This location was selected *purposively* (intentionally) considering that Moramo Sub District had started cultivating porang commodities. Data collection was carried out in September - December 2021. The population in this study totaled 127 porang farmer families in Moramo Sub District, South Konawe Regency. Determination of the sample using the *Purposive Sampling technique* in which the sampling determines unique characteristics that follow the research objectives. The samples referred to in this study were five direct actors (porang farmers), five traders, and two government agencies (Bappeda of South Konawe Regency and the Agriculture Office of South Konawe Regency). The variables for this study were obtained from a literature study and interviews with respondents about the strategy for developing porang commodity crops in Moramo Sub District, South Konawe Regency. The variables in question are criteria, namely the provision of inputs, cultivation techniques, government policies, institutions, and post-harvest. As well as alternatives, namely potential land use, extension activities, improving marketing networks, forming cooperatives, utilizing government support, and agro-industry. Data analysis in this study used the AHP method , namely model pendukung keputusan yang akan menguraikan masalah multi factor atau multi kriteria yang kompleks menjadi suatu struktur hirarki (Supriadi *et al*., 2018).

RESULTS AND DISCUSSION

Respondent Identity

The identities of porang farmers and traders discussed in this study include age and education. Period describes physical abilities, and education determines knowledge and mindset. The characteristics of the respondents used in this study are described in Table 1.

Table 1. Identity of Respondents Based on Age and Education Level of Porang Farmers and Traders in Moramo Sub District, South Konawe Regency

Description	Porang Farmer		Collector Trader		Government Agencies	
	Number (soul)	Percentage (%)	Number (soul)	Percentage (%)	Number (soul)	Percentage (%)
Age (years)						
0-14	-	-				
15-64	5	100	5	100	2	100
> 65	-	-	-	-	-	-
Level of education						
Junior High School	1	20	3	60	-	-
Senior High School	2	40	2	40	-	-
Bachelor	2	40	-	-	2	100

Based on the table above, it is known that the age of farmers, traders, and government agencies, including the productive age group, is 15-64 years. This shows that the age of farmers, traders, and government agencies included in the practical age category, is in line with the opinion (Samun *et al*., 2011), who stated that the non-productive age is under 15 years, and the productive age is 15-64 years. Non-productive age is more than 64 years.

A person's level of education can determine whether or not he is productive in business, and education will affect behavior and the level of adoption of an innovation. The higher a person's education, the company tends to be managed rationally by utilizing the education one has obtained from formal and non-formal education. Formal education is education that is received from schools such as elementary, junior high, high school, and college. Non-formal education is obtained without attending school, usually from training or courses.

Table 1 shows For farmers at the junior high school level, and there is one person or 20%. At the high school level, there are two people or 40%, and at the undergraduate level (Bachelor), there are two people or 40. For porang traders, three people, or 60%, attended junior high school education, and as many as two, or 40%, attended high school. In government agencies, the level of education that has been passed is strata one (S1). This shows that respondents have taken formal education, so getting information about the development of porang commodities in the future is more accessible. More Yasa & Hadayani (2017) argues that the level of education has an impact on a person's way of life because education is a deliberate process to increase one's knowledge, skills, and attitudes to achieve an increase in one's standard of living

Porang Commodity Development Criteria

As a priority in the development of porang commodities in Moramo Sub District, South Konawe Regency, criteria will be selected for the development of these commodities, which will be carried out using weighting based on the results of interviews with respondents using a questionnaire. In this process, a pairwise comparison is carried out between the existing criteria. Namely the provision of inputs, cultivation techniques, government policies, institutions, and post-harvest. The following are the priority criteria in the development of porang commodities in Moramo Sub District, South Konawe Regency, which can be seen in Table 2

Table 2. Criteria for the development of porang commodities

Criteria	Weight Value	Priority
Input Provision	0.155	4
Cultivation Technique	0.163	3
Marketing	0.279	1
Institutional	0.266	2
Post Harvest Handling	0.138	5

Table 2 shows that based on the results of data processing regarding respondents' opinions, it shows the criteria that influence the development of porang commodities in Moramo Sub District, South Konawe Regency, namely marketing criteria with a weight value (0.279). The marketing of porang in South Konawe District is currently not widespread enough within or outside the Moramo District area of South Konawe Regency, and this has caused some farmers not to cultivate porang

plants. Therefore, support is needed to improve the porang marketing network in Moramo District, South Konawe Regency. Because marketing activities are recognized as an essential aspect of production activities, all parties involved will benefit if the marketing mechanism goes well. According to, marketing is managing profitable customer relationships. The two goals are to attract new customers by promising superior value and to keep and grow existing customers by providing satisfaction.

Second, the institutional criteria with a weight value (of 0.266), as well as its function as an organization and activities centered around basic needs and meeting various human needs, a farm will never be separated from its institutional role. Institutions in the Moramo Sub District have not functioned optimally. There are still many institutional roles that have not worked for the progress of farmers in the Moramo Sub District, South Konawe District, especially In increasing the development of porang commodities. The role of an institution is urgently needed. If this institutional role does not yet exist, the development of commodity agribusiness will be hampered. According to Tedjaningsih *et al*., (2018), The role of institutions is crucial to the success of agricultural development because it will contribute to the accessibility of farmers to the socio-economic development of farmers and markets. Suppose it is related to the agribusiness system. In that case, institutions include the supporting service subsystem, where these institutions must be able to play a role in supporting activities in procuring production facilities, farming, processing of agricultural products, and marketing subsystems. As the main actors, farmers are the subjects in agribusiness development who are consumers of the services provided by agribusiness-supporting institutions. Agribusiness will run well if there is no gap between supporting institutions and their business activities.

Third, the criteria for cultivation techniques with a weight value (of 0.163). Cultivation techniques have a third role which is exceptionally influential in the development of porang. The application of cultivation techniques for porang commodities carried out by farmers in Moramo Sub-District, South Konawe Regency, has not been thoroughly carried out properly and correctly. Some farmers still fail to try porang farming because of the lack of knowledge farmers have about porang cultivation. Therefore an activity is needed which can add insight to farmers about porang plants because if there is a result of the products produced by porang plants, the application of cultivation techniques is not applied in a good and correct way, it will not be optimal. Basundari & Krisdianto (2020) stated that in addition to the season factor, proper cultivation techniques, such as choosing varieties, spacing, and applying fertilizers to ensure the availability of nutrients during growth, also determine the success of farming.

Fourth, the criteria for providing inputs with a weight value (of 0.155) providing inputs is the provision of production facilities for farming activities. Agricultural production facilities are equipment, equipment, and facilities that function as the primary tool or assistants in implementing agrarian production. Production facilities are essential in achieving output according to the desired goals. Agricultural production facilities or inputs consist of materials, including seeds, fertilizers, pesticides, and growth regulators. These facilities must be available before starting plant cultivation activities (Siwu *et al*., 2018). The production facilities owned by farmers in Moramo Sub District, South Konawe Regency, still use low-quality local seeds, starting from sources. A factor that cannot be separated from the increase in agricultural production. With appropriate and appropriate production facilities will have a perfect impact on the development and growth of plants.

Fifth, post-harvest handling with a weight value (of 0.138). Putra *et al*., (2021) Post-harvest handling are all activities carried out to maintain the quality of both vegetable and fruit products before they reach consumers. Improper post-harvest handling can cause losses in the form of decreased weight, changes in appearance, and changes in taste. These changes resulted in a decrease in the quality and selling value of the product. Post-harvest handling dramatically determines the quality of cultivated agricultural products and what the harvest will be used for, whether sold fresh or processed into new food ingredients. The main objective of post-harvest handling is to prevent physical damage. However, the criteria for post-harvest handling have a relatively small effect on the development of poran commodities in Moramo Sub District because post-harvest handling of porang in Moramo Sub District has not been implemented by farmers, the production results obtained after harvest are directly sold in raw form to buyers. So there is no further management of porang tubers. With the magnitude of the overall inconsistency ratio criteria of (0.00062), which means it is still below the tolerance of 0.1, the requirements are said to be consistent.

Alternative Priority Strategy for Porang Plant Commodity Development

The results of the analysis of the *Analytical Hierarchy Process* (AHP) as a whole for each alternative strategy for developing the porang commodity in Moramo Sub District, South Konawe

Regency, will see the overall value and weight of each alternative approach which will be a top priority in the development of the porang commodity. The following can be seen in Figure 1. below:

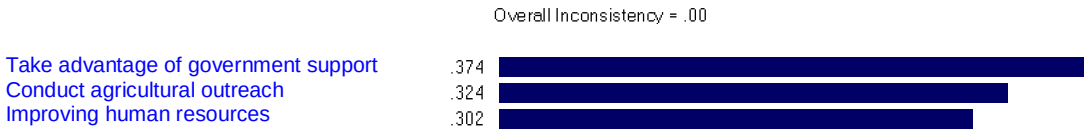

Figure 1. Graph and alternative weight values based on all criteria processed

Figure 1 in the context of developing the porang commodity in Moramo Sub District, South Konawe Regency, an alternative strategy with the highest weight value based on all criteria, namely utilizing government support with a weight value of (0.374). This is important because using government support for developing porang commodities can greatly assist farmers, especially in helping them regarding porang cultivation, starting from providing seeds, fertilizers, tools, or modern agricultural machinery to marketing porang so that development of the porang commodity can immediately increase. According to Ahmar *et al*., (2016), The government has two essential functions: the primary or service function and the secondary function or empowerment function. The primary role of the government is as a provider of public services that are not privatized, including defense and security, civil, and bureaucratic services. The secondary function is as a provider of needs and demands ordered by goods and services that they cannot fulfill because they are still weak and helpless. According to Raintung *et al*., (2021) The government's role as a facilitator is significant in supporting development activities in the village. Facilities do not only focus on providing facilities but also must pay attention to existing infrastructure because the lack of infrastructure, such as fertilizer, significantly affects the existing agricultural operations. The second held counseling activities with a weight value of (0.324).

Regarding agriculture, most of the rural population depends on agriculture for their livelihood. With great potential in agriculture, of course, this requires the support of superior agricultural extension resources to support government programs in agriculture and to be able to encourage and assist farmers in changing their lives to become prosperous (Vintarno *et al*., 2019). Agricultural extension services, whose position is as a companion to farmers, are expected to be even more observant in being able to assist porang farmers in carrying out farming activities, especially in porang marketing activities, so that farmers are not disadvantaged by several things such as the weak position of farmers to make offers to get reasonable prices due to a lack of market information.

At present, agriculture is not only about productivity but a whole from upstream to downstream, from cultivation to marketing. Good selling value for the production of porang farming will directly result in community interest in cultivating porang plants so that the development of porang commodities is a goal for farmers. The third is to develop existing resources with a weight value of (0.302). One of the things that drive the development of commodities is the quality of the resources owned, both natural and human resources. Along with increasing competition in the agricultural sector, porang things require resources that can differentiate themselves from other farming businesses. One of the factors that determine the success of farming lies in its human resources. Human resources can be a differentiating factor in competition through their job abilities. The objective basis for the success of a commodity development is no longer determined by the significant production process or the various types of products but by the quality of the people behind the story.

CONCLUSION

There are five criteria for developing porang commodities in Moramo Sub District, South Konawe Regency: supply of inputs, cultivation techniques, institutions, marketing, and post-harvest handling. Alternative strategies to develop Porang commodity crops in Moramo Sub District, South Konawe Regency, are developing human resources, holding agricultural extension activities, and utilizing government support. Priority strategies that can be applied in the development of Porang plant commodities in Moramo Sub District, South Konawe Regency, are using government support with a weight value of (0.374), holding extension activities with a weight value of (0.324), developing human resources with a weight value of (0.302)

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