

## **DEVELOPMENT STRATEGY OF SWEET POTATO RICE IN TEGAL ARUM VILLAGE RIMBO BUJANG SUB DISTRICT TEBO DISTRICT (Case Study of Sweet Potato Rice in The Farmer Women's Group "Kasih Ibu")**



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### **ABSTRACT**

This research was conducted in Tegal Arum Village, Rimbo Bujang Sub District, Tebo Regency, from January 15 to February 15, 2020. The study aimed to identify the internal and external factors influencing the sweet potato business's development and formulate strategies for its growth in Tegal Arum Village. The survey method was employed, involving respondents from a defined population using a questionnaire for data collection. This case study focused on the Household Industry Farmer Women Group "Kasih Ibu" in Tegal Arum Village. The findings revealed that internal factors for the sweet potato home industry included strengths such as self-sustained capital, easy access to labor, and affordable initial investment. Weaknesses identified were irregular capital turnover, inconsistent educational levels, and annual bookkeeping practices. External factors consisted of opportunities like the availability of raw materials, minimal competition, and participation in exhibitions. However, threats included competition from similar industries, limited promotional activities, inadequate tools and machinery, and foreign competition in sweet potato rice. The recommended development strategy for the "Kasih Ibu" Household Industry Farmers Group involves increasing capital through investments or loans, expanding marketing areas, and providing continuous management training to business owners. Additional strategies include utilizing existing capital to boost production, expanding market reach to modern markets, maintaining product quality, enhancing advertising and promotion, optimizing technology and tools, and establishing partnerships with other traders.

**Keywords:** development strategy; sweet potato rice; SWOT analysis.

### **INTRODUCTION**

Indonesia is an agrarian country where most of the population are farmers. The agricultural sector is the spearhead for the Indonesian people to realize the achievement of national development goals in meeting food needs. The success of development in this sector is expected to ensure food security rooted in the diversity of food resources, institutions, and local culture (Kartasapoetra, 1988). Moreover, improving the existing economic order in countries with large agricultural areas involves developing these areas to enhance the overall economic structure (Fikriman, 2017). In developing a farming business, the primary activities include increasing the production of agricultural goods, enhancing agricultural productivity, and promoting the development of regionally suitable commodities, such as root crops like cassava (*Manihot utilissima*).

The dependence of the Indonesian population on rice consumption has been increasing annually in tandem with population growth (Rachman et al., 2022). The prevailing consumption pattern, where Indonesians feel they have not eaten unless they have consumed rice, has hindered the successful implementation of the food diversification program launched approximately a decade ago. According to data from the Central Food Security Agency (BKP), Indonesia currently ranks first



globally in rice consumption. BKP also aims to reduce rice consumption per capita by 1.5% annually. This high rice consumption has necessitated the implementation of import policies, which negatively impact local farmers.

Various food diversification programs have been implemented to substitute rice with other staples. However, the consumption pattern of people accustomed to rice as their primary staple food has rendered various forms of diversification, such as making bread and noodles, less effective (Tabaglio et al., 2023). Food diversification based on local resources is a crucial food development policy to achieve food security. The goal is for the community to not depend solely on rice. Therefore, one of the strategies is to promote local food as a source of carbohydrates in flour. Cassava is one such root crop that can be utilized in this manner.

Cassava (*Manihot utilissima*) is a carbohydrate-rich tuber. Originating from the Americas, specifically Brazil, cassava is now cultivated globally, including in Africa, Madagascar, India, and China. It thrives in countries renowned for their agricultural regions (Purwono, 2009).

Cassava (*fresh tubers*) is generally processed into food and non-food products. In addition to being boiled, steamed, or fried for consumption, cassava tubers serve as raw materials for the food, chemical, pharmaceutical, and textile industries (Burns et al., 2010). Cassava stems and leaves are also helpful; the young leaves are rich in vitamin A, making them suitable for vegetable dishes, while the older leaves can be used as fuel, new plant cuttings, or fences.

Sweet potato rice is a potential solution for addressing the over-reliance on traditional rice by introducing new food sources and promoting food diversification. Sweet potato rice is an imitation rice made from cassava and cereals, resembling traditional rice's shape and nutritional composition. Sweet potato rice's nutritional composition can surpass traditional rice's (Slamet, 2012).

Sweet potato rice, also known as artificial rice, is made from non-rice materials with a carbohydrate content that matches or exceeds that of traditional rice and resembles the shape of rice. It can be produced from local flours or rice (Samad, 2003). Food is essential for human survival, and enhancing food security is a shared responsibility between the community and the government. One effort to achieve this is by developing food products that do not rely solely on a single ingredient but utilize various food sources (Suryana, 2009).

According to Law No. 7 of 1996 concerning food, food security is defined as the condition of fulfilling household needs, reflected in the availability of sufficient food in both quantity and quality and varied, evenly distributed, and affordable. The staple foods typically consumed by the community include rice, corn, cassava, sweet potato, arrowroot, and others. This study aims to determine the development strategy of sweet potato rice in Tegal Arum Village, Rimbo Bujang Sub District Tebo district.

## **MATERIALS AND METHODS**

This research was conducted in Tegal Arum Village, Rimbo Bujang Sub District, Tebo Regency, from January 15 to February 15, 2020. The location was selected intentionally (purposive sampling) due to the presence of the Sweet Potato Rice for Women Farmers Group, abbreviated as KWT "Kasih Ibu," in the village. According to Dewanti et al. (2002), cassava is the fourth most crucial food ingredient after rice, corn, and soybeans, and it is also the third largest staple food after rice and corn. Indonesia is the second-largest cassava-exporting country after Thailand, highlighting the potential of cassava to replace rice and enhance Indonesia's food security. However, cassava is still primarily considered an inferior food and is mainly used as a carbohydrate substitute or minimally processed into ready-made food. Tegal Arum hosts the most minor cassava rice industry in Rimbo Bujang Sub District. The case study method was employed in this study, focusing on a particular object. The object of this research is the Home Industry KWT "Kasih Ibu" in Tegal Arum Village, Rimbo Bujang Sub District, which utilizes cassava as the main ingredient for making sweet potato rice.

## **RESULTS AND DISCUSSION**

### **Internal and External Factors in Sweet Potato Rice Business**

#### **a. Internal Factor Analysis**

The internal factor analysis aims to identify the strengths and weaknesses of the sweet potato/oyek rice business as a basis for developing a suitable strategy for Mrs. Dian Kurniasih's business in Tegal Arum Village, Rimbo Bujang Sub District, Tebo Regency. The internal factors of the Sweet Potato Rice business owned by Mrs. Dian Kurniasih are as follows: 1) Labor: Labor is readily

available as most residents of Tegal Arum Village are migrants from Java. Their expertise inspired the idea of making cassava rice due to the local abundance of cassava. The business has about four members, and the availability of workers in Tegal Arum Village, Rimbo Bujang Sub District, Tebo Regency, is ample. 2) Capital: The initial capital for establishing the sweet potato business was approximately IDR 4,000,000, primarily sourced from personal funds, with partial government assistance. Profits from sales are distributed among members based on production output. Employees engage in cassava cultivation or catfish farming when not producing sweet potato rice. Monthly expenses for raw materials amount to around IDR 850,000, while operational costs range from IDR 100,000 to IDR 200,000. Financial management involves separating personal and business funds, with annual bookkeeping for capital, production costs, and sales. Capital turnover is irregular due to inconsistent monthly production. 3) Technology: The production process for Sweet Potato Rice relies on manual methods, with insufficient tools hindering production. Drying depends on sunlight; packaging uses a press machine to seal the packages. The entire process, from start to finish, takes about a week. The business location is strategic, being roadside, but mobility is hampered by inconsistent production (He et al., 2022).

#### b. External Factor Analysis

The analysis of external factors that present opportunities and threats in the development of the Sweet Potato Rice business owned by Mrs. Dian Kurniasih are as follows: 1) The raw material, cassava, is straightforward to obtain because most employees grow their own. The quality of the Sweet Potato Rice product is excellent, and its price is affordable. The marketing of Sweet Potato Rice products extends from Rimbo Bujang to areas outside the district and even to the province. The monthly income is approximately IDR 3,000,000. Two factors that significantly determine the efficiency of a marketing channel are marketing profits and selling/retail prices (Abhar et al., 2018). 2) Promotional activities are limited, but efforts to attract buyers include participating in exhibitions, which significantly increase sales. A severe obstacle in marketing Sweet Potato Rice products is the lack of public interest, as most people still prefer rice. However, competition in the Sweet Potato Rice Home Industry is minimal. 3) Each production cycle requires 100 kg of cassava, which is processed traditionally due to the lack of modern tools. This amount of cassava yields approximately 53 kg of sweet potato rice, depending on the age of the cassava; older cassava produces more yams, whereas younger cassava yields less. 3) The lack of support from the local government has posed some challenges for the Ubi Rice business. Nonetheless, the persistence of the members of the Women Farmers Group, known as KWT "Kasih Ibu," has kept the group active. They continue to participate in exhibitions at every opportunity, ensuring the survival of KWT "Kasih Ibu."

### Strategy for Development of Sweet Potato Rice

#### a. Internal Factor Analysis (IFAS)

Internal factors are derived from capital, labor, and technology. These factors are categorized into strengths and weaknesses in the Sweet Potato Rice business in Tegal Arum Village, Rimbo Bujang Sub District, Tebo Regency. The strengths and weaknesses are determined based on questionnaire responses from the Sweet Potato Rice business owner, with ratings and weights assigned through a priority assessment based on interviews and observations. The internal factors and assessment results of weights and ratings for the Sweet Potato Rice business in Tegal Arum Village, Rimbo Bujang Sub District, Tebo Regency, are presented in Table 1.

Table 1. Internal strategy factors

Internal Factors	Weight	Rating	Weight x Rating
Strength			
1. Source of own capital	0,20	4	0,80
2. Labor is straightforwardly found	0,20	4	0,80
3. Affordable starting capital	0,05	1	0,05
Weakness			
1. Uncertain production	0,20	1	0,20
2. Bookkeeping is done every year	0,10	2	0,15
3. Lack of smooth capital turnover	0,20	1	0,20
	0,95		2,20

Table 1 shows that the strengths of the Sweet Potato Rice business in Tegal Arum Village, Rimbo Bujang Sub District, Tebo Regency, include its source of capital, which comes from the

Women Farmers Group (KWT) "Kasih Ibu" itself, with a score of 0.80, and the ease of finding labor, also with a score of 0.80. Additionally, the affordability of initial capital, with a score of 0.05, facilitates the development of the Sweet Potato Rice business. However, the Women Farmers Group (KWT) "Kasih Ibu" sweet potato/oyek rice home industry in Tegal Arum Village has several weaknesses. These include the lack of smooth capital turnover, with a score of 0.20, and erratic production, also with a score of 0.20, which hinders the business's progress. Furthermore, annual bookkeeping practices, with a score of 0.15, contribute to these weaknesses. The combined score of strengths and weaknesses totals 2.20. Analysis of strengths and weaknesses in the context of the Women Farmers Group (KWT) "Kasih Ibu" in Tegal Arum Village, emphasizing the importance of these internal factors in determining business success (Tang et al., 2022).

b. External Factor Analysis (EFAS)

The company's external strategic factors will be identified and organized to formulate an external strategy. These factors include opportunities and threats to the Sweet Potato Rice business in Tegal Arum Village, Rimbo Bujang Sub District, Tebo Regency. The opportunity and threat factors were gathered from interviews and questionnaires with Sweet Potato Rice business owners. The ratings and weights for these factors were derived from the questionnaire responses and are presented in Table 2

Table 2. External strategy factors

External Factors	Weight	Rating	Weight x Rating
Opportunity			
1. Raw material available	0,20	4	0,80
2. Participation in exhibitions	0,20	4	0,80
3. There are not many competitors	0,05	1	0,05
Threat			
1. Image of sweet potato rice that is still foreign to the community	0,15	2	0,30
2. Lack of promotional/advertising activities	0,15	2	0,30
3. Lack of machines/tools used	0,20	1	0,20
	0,95		2.45

Source: Primary Data Analysis (2019)

Table 2 shows that the opportunities for the Sweet Potato Rice business in Tegal Arum Village, Rimbo Bujang Sub District, Tebo Regency, include abundant raw materials, particularly cassava, which scores 0.80. Additionally, the members grow cassava, ensuring a steady supply of raw materials for sweet potato rice production. There are also few competitors in the sweet potato rice business, which scores 0.05. Participation in exhibitions, which helps in marketing and sales, scores 0.80. However, the sweet potato rice home industry in Tegal Arum Village faces several threats. These include limited promotional activities, resulting in low public awareness of the product, which scores 0.30. The lack of machines or tools necessary for production scores 0.20, and the unfamiliarity of sweet potato rice among the community, who primarily associate cassava with chips and tape, scores 0.30. The combined score for the opportunity and threat factors in this sweet potato rice business is 2.45. Opportunities and challenges related to sweet potato cultivation, including raw material availability, market opportunities, and the impact on smallholder farmers (Afzal et al., 2021)

c. IE Matrix (Internal and External)

From the total score obtained, the internal strategy factor is 2.25, while the total external score is 2.45. Thus, the business position of the Sweet Potato Rice/Oyek Home Industry can be seen in Figure 1.

	Strong 4,00	Average 3,00	Weak 2,00
Tall >3,00	I Growth	II Growth	III Growth
Intermediate 2,00-2,99	IV Stability	V Growth Stability	VI Collapse
Low 1,00-1,99	VII Growth	VIII Growth	IX Liquidation

Figure 1. IE matrix (internal and external)

Figure 1 shows the score obtained from the internal strategy factor (2.25) and the external strategy factor (2.45), indicating that the coordinate point is located in the growth area V. Therefore, the appropriate strategy for developing the sweet potato rice home industry in Tegal Arum Village, Rimbo Bujang Sub District, Tebo Regency is a defense and growth strategy. Strategies such as maintaining product quality, expanding market share to increase product popularity, improving appropriate technology, and developing inter-industry cooperation can be implemented in the sweet potato rice business in Tegal Arum Village, Rimbo Bujang Sub District, Tebo Regency, although opportunities and threats associated with smallholder sweet potato cultivation, including raw material availability and market opportunities, as well as constraints such as limited promotional activities and lack of necessary production tools (Afzal et al., 2021)

d. SWOT Matrix

The SWOT matrix systematically identifies various factors to formulate corporate strategy. This analysis employs logic to maximize strengths and opportunities while addressing weaknesses and minimizing threats. The SWOT matrix for the development strategy of the sweet potato rice home industry in Tegal Arum Village, Rimbo Bujang Sub District, Tebo Regency, can be seen in Table 3.

Table 3. SWOT matrix of home industry development strategy for sweet potato rice

		Strength (S)	Weakness (W)
Internal		<ol style="list-style-type: none"> <li>1. Source of own capital</li> <li>2. Labor is straightforward to find</li> <li>3. Affordable starting capital</li> </ol>	<ol style="list-style-type: none"> <li>1. Lack of smooth capital turnover</li> <li>2. Production is erratic</li> <li>3. Bookkeeping is done every year</li> </ol>
Eksternal			
	Opportunity (O)	Strategi S-O	Strategi W-O
	<ol style="list-style-type: none"> <li>1. Raw material available</li> <li>2. There are no competitors.</li> <li>3. Participation in exhibitions</li> </ol>	<ol style="list-style-type: none"> <li>1. Increase in capital by adding investments or loans from other parties (S1, S2, S3, O1, O2, O3)</li> <li>2. Expanding the ripening area (S1, S3, O2, O3)</li> </ol>	<ol style="list-style-type: none"> <li>1. Management training for business owners that is carried out on an ongoing basis so that they can develop (W1, W2, W3, O1, O2, O3)</li> <li>2. Utilizing existing capital to increase production to dominate the market when there are no other competitors from the cassava rice industry (W1, W2, W3, O1, O2)</li> </ol>
	Treat (T)	Strategi S-T	Strategi W-T
	<ol style="list-style-type: none"> <li>1. Image of sweet potato rice that is still foreign to the community</li> <li>2. Lack of promotional/advertising activities</li> <li>3. Lack of machines/tools used</li> </ol>	<ol style="list-style-type: none"> <li>1. Expanding market share such as modern market (S1, S2, T1, T2, T3)</li> <li>2. Maintaining product quality in order to remain competitive with other products (S1, T1)</li> </ol>	<ol style="list-style-type: none"> <li>1. Increase advertising/promotion to be better known and broader market share (W1, W2, T1, T2, T3)</li> <li>2. Cooperating with other traders inside and outside the region so that the distribution process is broader (W2, T1, T2)</li> <li>3. Optimizing the use of technology machines/tools to expedite the production process (W2, T3)</li> </ol>

Table 3 shows the results of the identification of internal factors, in the form of strengths and weaknesses, and external factors, in the form of opportunities and threats, in developing the Home Industry Business of Sweet Potato Rice/Oyek in Tegal Arum Village, Rimbo Bujang Sub District, Tebo Regency. The strategies derived from this analysis include:

The S-O (Strength-Opportunity) strategy maximizes strengths and takes advantage of existing opportunities. This strategy includes increasing capital by adding investment or loans from

other parties (SO-1) and expanding the marketing area (SO-2). The strategy focuses on increasing capital through investments or loans and expanding marketing areas, which aligns well with the strategies outlined for developing the sweet potato rice home industry in Tegal Arum Village (Dalton, 2019).

The W-O (Weakness-Opportunity) strategy aims to minimize weaknesses while leveraging opportunities. This involves conducting ongoing management training for business owners to foster business development (WO-1) and utilizing existing capital to increase production and dominate the market without competitors from other cassava rice industries (WO-2). Strategies like conducting ongoing management training and utilizing existing capital to increase production and market dominance in the absence of competitors are crucial for the Sweet Potato Rice business (Wehrich, 1982)

The S-T (Strength-Threat) strategy uses strengths to overcome threats. The alternative strategies for this category include expanding market share by targeting modern markets (ST-1) and maintaining product quality to stay competitive with other products (ST-2). Strategies for expanding market share by targeting modern markets and maintaining product quality to stay competitive (Dalton, 2019)

The W-T (Weakness-Threat) strategy addresses weaknesses while overcoming threats. The proposed actions include increasing advertising and promotion to enhance product recognition and expand market share (WT-1), cooperating with other traders both within and outside the region to broaden the distribution process (WT-2), and optimizing the use of technological machines and tools to streamline the production process (WT-3). Increasing advertising and promotion to enhance product recognition, cooperating with other traders to broaden the distribution process, and optimizing the use of technological machines and tools to streamline the production process (Wehrich, 1982)

## CONCLUSIONS AND SUGGESTION

The internal factor analysis found that the business's main strengths are independent capital, ease of obtaining labor, and affordable start-up capital. However, some weaknesses, such as unsmooth capital turnover, unstable production, and bookkeeping practices, are present annually. External factors show significant opportunities, such as the availability of raw materials, lack of competitors, and participation in exhibitions. On the other hand, there are threats in the form of a lack of promotional activities, limited production tools and machinery, and an unfamiliar image of rice yam in the community. Suggested development strategies include maximizing strengths by increasing capital through investment or loans and expanding marketing areas (S-O Strategy), reducing weaknesses with ongoing management training for business owners, and utilizing existing capital to increase production (W-O Strategy). Utilize strengths to overcome threats by expanding market share and maintaining product quality (S-T Strategy), overcoming weaknesses and threats by increasing promotional activities, collaborating with other traders to expand distribution, and optimizing the use of technology in the production process (W-T Strategy). To enhance the development of the Sweet Potato Rice business in Tegal Arum Village, it is recommended that business owners consider raising capital through investment or loans to expand marketing areas and increase production. In addition, it is essential to conduct ongoing management training for owners and farmer group members to strengthen managerial and operational skills. Promotion and marketing activities also need to be improved to increase public awareness. Optimizing modern production technologies and tools can improve efficiency and product quality. In addition, establishing cooperation with other traders within and outside the region will expand the product distribution network. With these steps, it is expected that the Sweet Potato Rice business can develop better and contribute to local food security.

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