DEVELOPMENT STRATEGY OF SIAMESE ORANGE FARMING ON PEATLAND IN SUMBER BAKTI VILLAGE, DARUL MAKMUR DISTRICT, NAGAN RAYA REGENCY

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Abstract

Siamese orange farming on peatlands is one of the agricultural businesses that has the potential to have a positive impact on the development of the agricultural sector. One of the districts that has the potential to develop Siamese orange cultivation and contribute to the productivity of Siamese oranges in Aceh is Nagan Raya District. Currently, the price of Siamese oranges continues to increase and consumer demand is quite high both in supermarkets and traditional markets. However, Siamese orange farmers in Sumber Bakti Village, Darul Makmur District, Nagan Raya Regency often experience losses in conducting their farms. Therefore, it is necessary to formulate a strategy in the development of Siamese orange cultivation. In identifying development strategies can be done with SWOT Analysis (Strength, Weaknesses, Opportunities, Threats), with the SWOT Matrix will make it easier to formulate various strategies that need or must be carried out. The results of the study found that a progressive strategy is a strategy that is in accordance with the conditions in the field. Progressive strategies can be achieved through 1) increasing product quantity, 2) Online Marketing, 3) Building partnerships with local markets, 4) Making innovations in the production process and 5) Making good risk management in the development of Siamese Orange farming.

Keywords: ***Development Strategy, Siamese Orange, SWOT***

1. INTRODUCTION

The agricultural sector has played a major role in national development through the formation of Gross Domestic Product (PDP), providing employment opportunities, a source of community income, overcoming poverty, obtaining foreign exchange through exports, and creating national food defense as well as creating conducive conditions for the implementation of development in other sectors (Mursida (2005).More than 50% of Indonesia's population works as a contributor to energy agriculture. The agricultural sector plays an important role in maintaining national food security, employment, national development, and so on. Agriculture consists of several subsectors, namely the forestry subsector, plantation sector, fisheries subsector, livestock sector and agricultural subsector which includes food crops and horticulture. Therefore, agriculture means activities carried out by humans by utilizing existing biological resources, flora and fauna, to fulfill human needs, such as food, industrial raw materials and energy sources.(Badrus Soleh et al., 2022). Oranges are a horticultural commodity with high economic value. Oranges are popular not only for their freshness, but also for their fiber content and various nutrients and vitamins that are beneficial for health(Primiwisata Suci & Purnama Hendri, 2019). Indonesia is included in the top 10 orange producing countries in the world after Brazil, China, India, America, Mexico, Spain and Egypt(Food and Agriculture Organization, 2019). Indonesia's orange production over the last 5 years has increased from 1.78 million tonnes in 2014, to 2.16 million tonnes in 2018 (Indonesian Central Statistics Agency, 2018). This shows that there is an opportunity to increase orange production more optimally, so that it can meet the needs of domestic consumers. The supply of oranges for domestic consumers is

still largely fulfilled by imported fruit. The volume of Indonesian orange fruit imports in 2016 reached 2,212 tons(Primiwisata Suci & Purnama Hendri, 2019). The agricultural sector is a sector that has a very important role for every country in the world, including Indonesia. Indonesia is an agricultural country which positions the agricultural sector as an important sector in carrying out and carrying out state development.

Siam Orange farming on peat land is one of the agricultural businesses that has the potential to have a positive impact on the development of the agricultural sector in Indonesia. Peatlands in Indonesia reach around 14 million hectares and most of them have not been utilized optimally. In order to optimize peatlands, one of the efforts that can be carried out is the development of Siamese orange farming on peatlands. Food and horticultural crops, including oranges, which are cultivated on peatlands, have the potential to develop agricultural products(Septirosya et al., 2020). The area of peat land in Nagan Raya Regency is stated to be 57,191 ha (KLHK, 2019). Peatlands need special treatment to potentially be used as agricultural land by improving nutrients for fertility and standardizing soil pH to stabilize the acidity level in the land. One of the districts that has the potential to develop Siam Orange cultivation and contribute to the productivity of Siamese Oranges in Aceh is Nagan Raya Regency. This district, which is located in the southwestern part of Aceh, has 10 sub-districts, 222 sub-districts/villages. Darul Makmur District is a sub-district in Nagan Raya which has the second highest Siamese orange production potential after Seunagan. The following is Siamese orange production data by sub-district in Darul Makmur.

Table 1. Production of Siam Oranges in Nagan Raya Regency, 2020 – 2021

No	Subdistrict	Siam Orange Production (Kwintal)	
		2020	2021
1	Darul Makmur	169.00	453.00
2	Tripa Makmur	15.00	24.00
3	Kuala	54.00	33.00
4	Kuala Pesisir	-	110.00
5	Tadu Raya	4.00	18.00
6	Beutong	438.00	40.50
7	Beutong Ateuh Banggalang	-	-
8	Seunagan	436.00	778.00
9	Like Makmue	52.00	11.00
10	East Seunagan	-	-
Amount		**1,168.00**	**1,467.50**

Source: Nagan Raya Regency Central Statistics Agency(BPS), 2022)

Based on Table 1, the increase in the amount of orange production in Darul Makmur District was 284 quintals in 2021, whereas in 2020 it was 169 quintals to 453 quintals. Darul Makmur subdistrict is in second place with the most orange production, first place with the most orange production in Nagan Raya, namely Seunagan subdistrict with total production in 2021 of 778 quintals. This shows that Darul Makmur District still has potential for developing the orange commodity. Siamese oranges are widely cultivated because they have their own characteristics, such as round fruit, yellowish green color, smooth and shiny surface, soft flesh, distinctive orange smell, and contain a lot of water, like oranges in general. Siam Orange cultivation has quite good prospects for the future. Currently, the price of Siam Oranges continues to increase and consumer demand is quite high both in supermarkets and traditional markets. However, Siamese Orange farmers in Sumber Bakti Village, Darul Makmur District, Nagan Raya Regency often experience losses in carrying out their farming business. Therefore, it is necessary to research the strategy for developing Siamese orange cultivation in Sumber Bakti Village, Darul Makmur District, Nagan Raya Regency. With the aim of

farmers not experiencing losses in farming Siam Oranges and formulating the right strategy to be able to develop this farming business.

2. RESEARCH METHODS

The research was conducted in Sumber Bakti Village, Darul Makmur District, Nagan Raya Regency, with the consideration that one of the largest producers of Siamese Oranges is in Darul Makmur District. The location selection was carried out deliberately (Purposive Sampling). The type of research used is Descriptive Qualitative. The research was conducted in August – November 2022. The population in the research was farmers cultivating the Siam Orange crop commodity in Sumber Bakti Village, Darul Makmur District, Nagan Raya Regency as a whole, with a research sample taken of 12 farmers. The sampling technique uses the census method. The type of data used is primary data, including survey results, interviews and questionnaires, while secondary data includes service data. In identifying the development strategy of a business, there are various factors that are arranged systematically to formulate a company strategy. Analysis that uses logic to find strategic fit between external opportunities and internal forces. SWOT analysis (Strengths, Weaknesses, Opportunities, Threats) is used to evaluate opportunities and challenges in the agribusiness environment. To make it easier to carry out a SWOT analysis, a SWOT matrix is needed. The SWOT matrix will make it easier to formulate various strategies that need to be implemented, by grouping each SWOT element problem into a table.(Kuncoro, 2006; David, 2011).

Table1. SWOT Matrix

Internal factors External Factors	*Strengths*(S)	*Weaknesses*(W)
Opportunities(O)	SO Strategy Use strengths to take advantage of opportunities	WO Strategy Minimize weaknesses to take advantage of opportunities
Threats(T)	ST Strategy Using force to overcome threats	WT Strategy Minimize weaknesses to avoid threats

Source: David, 2011

3. RESULTS AND DISCUSSION

3.1 Characteristics

The characteristics of Siam Orange farmers consist of age, education, experience and land area for farming. Age is very important data because it is closely related to a person's behavior or economic activity performance. Based on Table 2, the majority of farmers are in the age range 15 - 54 years, namely 10 farmers with a percentage of 83.33% which explains that the age of Siam Orange farmers is categorized as productive age.(Abdullah 2006).UMyrrh will influence the level of work activity, because age is related to the physique of the workforce, where the younger the age, the more likely the workforce is to have a strong and dynamic physique.

Table2. Respondent Characteristics

1	Age (Years)	Amount (Person)	Percentage (%)
	a) < 15	-	-
	b) 15 – 54	10	83.33
	c) > 54	2	16.67

	Amount	12	100.00
2	Level of education	Amount (Person)	Percentage (%)
	a) elementary school	9	75.00
	b) JUNIOR HIGH SCHOOL	3	25.00
	c) SENIOR HIGH SCHOOL	-	-
	Amount	12	100.00
3	Experience (years)	Amount (person)	Percentage (%)
	a) < 10	3	25.00
	b) 10 - 20	6	50.00
	c) > 20	3	25.00
	Amount	12	100.00
4	Land Area (Ha)	Amount (person)	Percentage (%)
	a) 0 - 0.5	-	-
	b) > 0.5 - 1	8	66.67
	c) > 1	4	33.33
	Amount	12	100.00

Source: Primary Data (processed), 2023.

The level of education can influence a farmer's ability to make decisions about his ability to farm. Table 2 shows that the highest level of education achieved by respondents was elementary school, 9 farmers with a percentage of 75%, this is due to the perception that the cost of education is still expensive and the desire to go to school is still expensive. AlthoughMost respondents attended elementary school (SD), meaning farmers can read and count. Moreover, as time goes by, farmers are also becoming more aware of technology.Apart from that, experience is also one of the things that influences a farmer's skills and ability to manage his business so that he makes a profit, along with the distribution of farmers' experience. In line with farming experience, there are 50% of farmers who have 10 – 20 years of experience.With sufficient experience capital, farmers are more skilled in their work and have a better understanding of farming(Soehardjo and Patong 1999). Meanwhile, for land ownership,average land ownership is in the range greater than 0.5 – 1 ha, meaning that land ownership is classified as medium, according to the opinion(Hernanto 2007), land area is divided into 3 groups, namely a) large land, if the area is >2 Ha, b) medium land, if the area is 0.5 - 2 Ha and c) narrow land, if the area is <0.5 Ha.

3.2 SWOT analysis

SWOT analysis is the systematic identification of various factors to formulate company strategy (Rangkuti, 1998). This analysis is based on logic that can maximize strengths and opportunities, but simultaneously minimize weaknesses and threats. The strategic decision making process is always related to the development of the company's mission, goals, strategies and policies. Thus, strategic planning must analyze the company's strategic factors (strengths, weaknesses, opportunities and threats) in current conditions. SWOT analysis compares external factors of opportunity and threats with internal factors of strength and weakness.(Nisak, 2013).

1) Analysis of Internal Strategic Factors and External Strategic Factors

At this stage, statements were grouped related to Siam Orange farming. The group of questions was regarding internal and external factors. Internal factor analysis is used to analyze strength and weakness factors, while external factor analysis is used to analyze opportunities and threats in the development of Siam Orange.

a) Internal Strategic Factor Analysis (IFAS)

The weight calculation in IFAS (Internal Factor analysis summary) is produced by multiplying the weight value by the rating. Details of the IFAS (Internal Factor Analysis Summary) on the development of Siamese orange farming can be seen in Table 3.

Table3.Analysis of Internal Strategic Factors (IFAS) for the Development of Siamese Orange Farming.

INTERNAL FACTORS			
STRENGTH	**WEIGHT**	**RATINGS**	**SCORE**
Quality of Siamese oranges	0.07	4.00	0.26
Availability of organic raw materials as fertilizer raw materials	0.17	3.67	0.62
Siamese oranges have high production potential and stable demand	0.12	3.67	0.44
Peat land is suitable for cultivating Siamese oranges	0.10	4.00	0.41
support for government programs in farming business development	0.08	3.67	0.31
Total Strength	**0.54**		**2.04**
WEAKNESS			
Limited capital for developing Siamese orange farming	0.08	3.33	0.28
Irrigation is not good enough, so it is necessary to implement a paludiculture system because it is located on peat land	0.05	3.67	0.20
Limited market access due to the long distance from the city center	0.07	4.00	0.25
Lack of knowledge in farming business management and product marketing	0.13	3.33	0.45
There is no technology for cultivating Siamese oranges	0.13	2.33	0.29
Total Weakness	**0.46**		**1.46**
	1		**3.50**

Source: Primary Data (processed), 2023.

OnTable 3 shows that the calculation results show that the total score on the strength factor is 2.04 and the total score on the weakness factor is 2.04.1.46. The result of the reduction between the total strength and weakness scores is equal to0.57. Based on the results of these calculations, it is known that the total score on the strength factor is greater than the total score on the weakness factor. The strength factor score that has the most influence on the Siam Sumber Bakti Orange development strategy isAvailability of organic raw materials as fertilizer raw materialswith a total score of 0.49. The highest weakness factor score in Table 2 isLimited capital for developing Siamese orange farming0.62 while the highest weakness factor isLack of knowledge in farming business management and product marketing is 0.45.

b) Internal Strategic Factor Analysis (IFAS)

The weight calculation in EFAS (External Factor Analysis Summary) is produced by multiplying the weight value by the rating. Details of EFAS (External Factor Analysis Summary) on Siamese Orange farming development can be seen in Table 4.

Table4.Analysis of External Strategic Factors (EFAS)
for the Development of Siamese Orange Farming.

External Factors			
OPPORTUNITY	**WEIGHT**	**RATINGS**	**SCORE**
Potential for developing derivative products from Siamese oranges, such as drinks and processed foods	0.10	3.00	0.31
Fulfilling the local Aceh market and potentially meeting the needs of markets outside the region	0.13	3.00	0.38
The high market demand for Siamese oranges is increasing	0.08	3.67	0.30
There is high public interest in consuming Siamese oranges	0.10	3.67	0.37
Opportunities for developing agrotourism businesses	0.14	3.00	0.41
Total Opportunities	**0.55**		**1.78**
THREAT			
The threat of climate change which impacts land quality and air availability	0.11	4.00	0.45
Poor handling post-harvest	0.10	2.33	0.23
There is a risk of disease outbreaks that will cause losses to Siamese orange farmers	0.11	3.00	0.34
The threat of unpredictable weather such as drought and floods	0.12	3.33	0.40
Competition is increasingly fierce from Siamese products from other regions	0.01	3.67	0.02
Total Threats	**0.45**		**1.43**
	1		

Source: Primary Data (processed), 2023.

FromTable 4, it is known that the total score on the opportunity factor is equal to1.78and the total score on the threat factor is 1.43. The result of the reduction between the total strength and weakness scores is 0.35. Based on the results of these calculations, it is known that the total score on the opportunity factor is greater than the total score on the threat factor. The most influential opportunity factor score isOpportunities for developing agrotourism businesseswith a total score0.41while the highest threat factor score isThe threat of climate change which impacts land quality and air availabilitywith a total score0.45.

c) Internal Factor Evaluation (IFE) and External Factor Evaluation (EFE) Matrix Values

Furthermore, the determination of IFE and EFE in order to evaluate the internal and external factors resulting from the research can be seen in Table 5 below.

Table5.Calculation Results of IFAS (Internal Factor Analysis Summary)
and EFAS (External Factor Analysis Summary) factors.

FACTOR	**TOTAL SCORE**
Strength	2.04
Weakness	1.46
Opportunities	1.78
Threats	1.43
IFE	**0.57**
EFE	**0.35**

Source: Primary Data (processed), 2023.

The total IFE value from the reduction of strength and weakness factors is 0.57, while the EFE value is the reduction of opportunity and threat factors, namely 0.35, where the IFE and EFE values are used to draw the SWOT diagram.

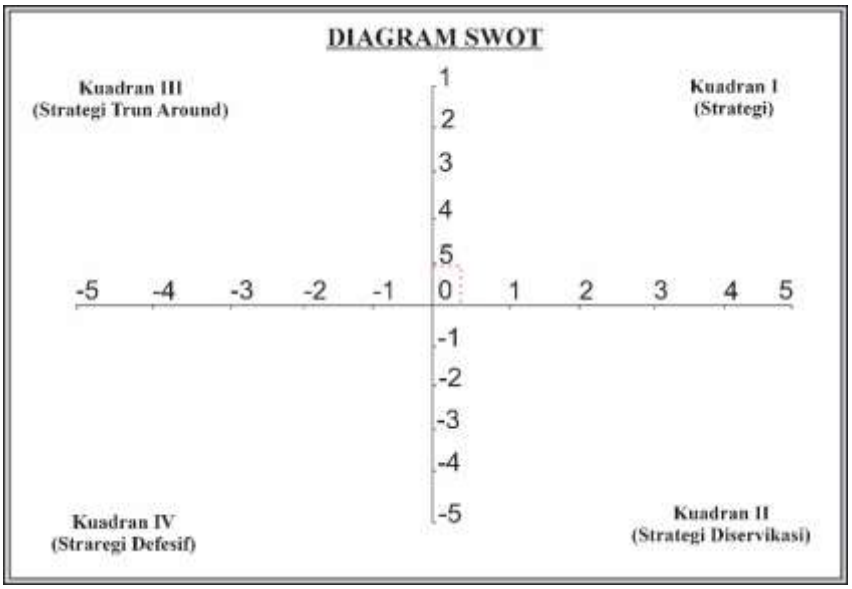

Figure 1. SWOT Diagram of Siam Orange Development in Sumber Bakti Village.

Based on Figure 1, it can be seen that the development of the Siamese orange farming business is in a position between the opportunity and strength axes, namely quadrant 1, meaning that the development of the Siamese orange farming business is recommended to carry out a progressive strategy by utilizing the internal strengths of the farming business to gain profits from external opportunities. to achieve increasing agricultural growth.

d) SWOT Matrix

With SWOT analysis, we can get the right and effective strategy for developing Siamese Oranges in Sumber Bakti Village. The SWOT matrix shows how your strengths and weaknesses are able to face opportunities and threats that occur. There are four (4) alternative strategies in the SWOT matrix. The Strategic Alternatives are in the form of SO ST, WO and WT. The SWOT matrix in this research is as follows.

Table6. Siam Orange Development SWOT Matrix

Factor Evaluation	**Strength (strength)**	**Weakness (weakness)**
Internal / **External**	1. Good quality Siamese oranges 2. Availability of peat land suitable for cultivating Siamese oranges. 3. Availability of organic raw materials as fertilizer. 4. Siamese oranges have high production potential with stable demand. 5. there is support from government programs in development	1. Limited capital for farming business development. 2. Lack of knowledge in farming management and product marketing. 3. There is no Siam Orange cultivation technology. 4. Limited market access due to the long distance from city centers. 5. Irrigation is not good enough, so it is necessary to implement a paludiculture system because it is on peat land
Opportunities (opportunities)	**S–O**	**W–O**
1. The high market demand for Siamese oranges is increasing. 2. Potential for developing derivative products from Siamese oranges, such as drinks and processed foods. 3. Fulfillment of the local Aceh market and the potential to meet the needs of markets outside the region. 4. Opportunities for developing agrotourism businesses (plantations as the first object). 5. Public interest in consuming oranges is high	1. Application of new technology to increase product quantity (S1, S3, S4, S5, O1, O2, 05) 2. Online Marketing (S4,S5,O1,O2,O3,O4,O5) 3. Building partnerships with local markets (S3, S4, S5, O1, O2, O3, O4, O5) 4. Creating innovations in the production process (S1, S4, O2, O4) 5. Creating good risk management in developing citrus farming (S1, S2, S3, S4, S5, O1, O2, O3, O4, O5)	1. Processing Siamese oranges into derivative products (W3;O2)
Thearts (threats)	**S–T**	**W–T**
1. Competition is increasingly fierce from other Siamese orange products originating from other regions. 2. The threat of erratic weather, such as drought and floods.	1. Implement a good irrigation system and utilize peatland moisture (W5; S2, S3)	1. The need for government support as well as counseling and training for farmers (W2, W3; T4, T2) 2. The need for the government's role in capital procurement (W1;

Factor Evaluation	Strength (strength)	Weakness (weakness)
3. The threat of climate change has an impact on land quality and air availability. 4. There is a risk of an outbreak of citrus plant disease which could cause losses for farmers. 5. Poor handling during post-harvest		T5)

Source: Primary Data (processed), 2023

Based on Table 6, the Siam Orange farming development strategy is based on internal and external factors which have been translated into a SWOT matrix strategy. The recommended strategy is the SO Strategy. The strategy formulation for the SO strategy is as follows:

1. *Application of new technology to increase product quantity, (S1, S3, S4, S5, O1, O2, 05)*
   In a farming activity, the application of technology is very important in supporting plant productivity and saving labor, apart from that it can also improve the quality of the products produced in the Siamese orange farming business in Sumber Bakti Village. Farmers need to apply several technologies such as soil sensors. , automatic irrigation, or monitoring plant growth to improve product quality.
2. *Online Marketing (S4,S5,O1,O2,O3,O4,O5)*
   Online marketing is an important aspect in a business activity, in farming itself online marketing can expand market share for farmers. Farmers can sell their products outside the area by selling online so that farmers' income can increase and the products offered by farmers can be known. to outside the area, therefore Siamese Orange farming in Sumber Bakti Village needs to implement an online marketing strategy,
3. *Building partnerships with local markets (S3, S4, S5, O1, O2, O3, O4, O5)*
   In a partnership farming activity, it is an important thing to do. With a partnership, farmers can collaborate in marketing their agricultural products. Siamese orange farming in Sumber Bakti Village needs to partner with local markets to be able to market their products in traditional markets and also in supermarkets. market in order to expand the market.
4. *Creating innovations in the production process (S1, S4, O2, O4)*
   In every business, innovation is really needed in developing a product, good innovation can increase the value of the product, in developing the Siam Orange farming business in Sumber Bakti Village, farmers need to make innovations such as using vegetable pesticides to repel pests and using herbicides to eradicate weeds in order to increase production and maintain product quality,
5. *Creating good risk management in the development of Siam Orange farming (S1, S2, S3, S4, S5, O1, O2, O3, O4, O5)*
   Every business definitely has risks in it, therefore farmers need to carry out good risk management in order to minimize existing risks, risks such as bad weather, price fluctuations and pest attacks often make farmers lose money, because of this the development of orange farming businesses Siam in Sumber Bakti village needs to consider the risks that will occur, some of these risks can be minimized by farmers making insurance for their farming businessWO strategy, namely processing Siamese orange derivative products so as to add other alternatives. ST's strategy, Collaborating with government agencies such as PDAM and the Department of Agriculture in carrying out irrigation so that they are able to maintain the irrigation system on the land and provide adequate facilities and infrastructure. WT Strategy: Seeking support from the government and related agencies in developing farming businesses, so that farmers can maintain and increase profits.

4. CONCLUSION

Alternative strategies that can be used to develop Siam Orange farming in Sumber Bakti Village, Darul Makmur District, Nagan Raya Regency are the SO Strategy, by implementing new technology to increase product quantity, online marketing, building partnerships with local markets, creating innovations in the production process and Creating good risk management in developing the Siam Orange farming business.

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