

Strengths Weaknesses Opportunities Threats Analysis in Improving Shallot Business Strategies

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Article Info

Article history:

Received : Aug 11, 2024

Revised : Sept 03, 2024

Accepted : Oct 22, 2024

Keywords:

Shallots;
Farming;
SWOT.

ABSTRACT

Shallot plants have the prospect of being developed if farmers have the will and ability to run their farming business. Shallots (*Allium ascalonicum* L) are one of the spice vegetables that people really need and are used as a spice/flavoring both in daily cooking and the food industry and can be used as medicine. Shallots are also a horticultural commodity that is really needed by humans, so shallots have high economic value. The type of research used in this research is qualitative research. This research obtained data from interviews and observations. The data analysis method is SWOT matrix analysis. The aim of the research is to analyze the internal factors of shallot farming and analyze external factors in the development of shallot farming. The research results show that the dominant internal factor influencing shallot farming is natural resources and the most dominant weakness is farmers' capital. In terms of external factors, the most dominant opportunity is market demand and the most dominant threat is environmental factors.

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1. INTRODUCTION

Shallot farmers in carrying out their farming business are inseparable from environmental influences and problems, both internal and external. Internal problems generally include a lack of ability to apply technology by farmers, limited control of agricultural land, weak farming capital and limited availability of inputs, while external problems that commonly occur are uncertain climate change, attacks by organisms that disturb shallot plants, and fluctuations in shallot prices. Judging from the marketing aspect of shallots and the projected demand for shallots, it is very profitable, but must be balanced with optimal use of inputs (Taib & Supriana, 2020) The increasing demand for shallots proves that shallots have excellent potential. This potential is also supported by the absence of substitute materials, either synthetic or natural. However, the problem that shallots often face is erratic price fluctuations. This is because demand for shallots tends to be evenly distributed throughout the year while shallot production is seasonal (Siahaan et al., 2018).

According to Samodro & Yuliawati, 2018, the strategy for developing organic vegetable farming needs to be known so that the business can continue, including trading strategies such as nutmeg commodities to increase farmers' income and welfare (Kurniati, 2019). Furthermore (Lawalata, 2017) stated that the potential development of nutmeg should be studied based on the level of land control which will have an impact on future productivity. Therefore, research on strategies for developing shallot commodities is important because apart from the limited amount of research, it is also to find

strategies on how to encourage the competitiveness of local onion commodities to seize local market opportunities in order to improve farmers' welfare (Girsang et al., 2019).

Management in the agricultural sector by planting shallot seeds is one strategy for developing and improving farmers' welfare. At certain times, the availability of shallots is lacking and demand is quite high, resulting in soaring prices. This potential creates added value and open opportunities for vegetable farmers as producers to reap profits. Farmers frequently sell to intermediaries, which has an impact on their profitability based on the supply chain. Because of their huge scale, large traders almost never source shallots directly from farmers; instead, they always buy through intermediaries, who make the purchasing process quicker and easier (Pranata, 2024). Because of subpar marketing channels, efficiency is not attained to its full potential as a result. Farmers also have to deal with price fluctuations on a regular basis. Due to the inverse relationship between low production costs and high output prices, farmers may experience losses as a result of this price volatility. Aside from that, comparatively costly seeds and fertilizers are another issue that farmers frequently raise (Hakim et al., 2023).

SWOT analysis can be utilized for both personal and professional objectives, even though it is most frequently employed by government agencies, major corporations, and organizations. SWOT analysis is a useful technique for discovering areas of competition that can be improved. Possibilities, risks, opportunities, and weaknesses (Model et al., n.d.). SWOT analysis is particularly useful for government agencies, major corporations, and organizations, but it can also be applied for private and professional objectives. When looking for competitive chances for improvement, SWOT analysis is a useful technique. Opportunities, dangers, vulnerabilities, and strengths (Mardiono et al., 2019).

2. METHOD

This research was carried out in Payung Village, Payung District, Karo Regency, North Sumatra Province. Payung Village is one of the largest shallot producing areas in the Karo district. Observed Parameters: Internal factors (Strengths and weaknesses) in shallot (*Allium ascalonicum* L) farming in Payung Village. External factors (Opportunities and threats) in shallot (*Allium ascalonicum* L) farming in Payung Village.

Shallot farmer respondents were interviewed and asked to fill out a questionnaire to provide primary data for the research. The number of respondents was 30 shallot farmers. Secondary data was obtained from village institutions and BPS. Surveys are used in the data collection procedure. SWOT is used in the data analysis approach (Darmawan, 2018). This matrix explains in detail how the needs, strengths, and weaknesses are taken into account while adjusting to external opportunities and dangers. The SWOT matrix analysis is an extension of the internal-external scenario analysis, in which opportunity and threat aspects are integrated with internal factors, such as strengths and weaknesses. describing research in a chronological manner, including data collection, test-taking techniques, study design, and research methodology (using algorithms, pseudocode, or other forms). To ensure that the explanation is accepted by science, the research course description needs to be backed up by references. As seen below, the figures and table are presented in the center (Suwarno, 2018).

Table 1. Determination of Internal and External Factor Scores for the Development of Shallot Farming in Payung Village, Payung District

Parameters	Average Score	Assessment Results	Number of Respondents
Internal			
Natural resources	4	Strength	30
Farmer's Experience	4	Strength	30
Red onion production	3	Strength	30
Land area	3	Strength	30
Farmer Capital	3	Weaknesses	30
Shallot seeds	3	Weaknesses	30
Input usage	2	Weaknesses	30
Farmers Partnership	2	Weaknesses	30
Parameter Eksternal			
Market Demand	4	Opportunity	30
Farming Profits	3	Opportunity	30
Infrastructure and supporting facilities	3	Opportunity	30
Agroindustry			
Support from farmer groups and extension workers	2	Opportunity	30
Environmental Factors	4	Threat	30
Market Access	3	Threat	30

3. RESULTS AND DISCUSSION

3.1 Research Results

Internal Factor Analysis: Natural Resources. Payung Village is the area with the most potential for cultivating horticultural crops and perennial crops. **Farmer Experience.** Farmer experience is one of the factors that influences the skill and success of farming. Farmers generally acquire knowledge about shallot farming by self-teaching, where this knowledge is passed down from generation to generation from the family. **Shallot Production.** Shallot production in Payung Village is relatively high, so it can be a strength in developing shallot farming in the research area. According to BPS, red onion production in Payung District in 2021 is 1,614 tons, with an average production of 10.22 tons/ha (Badan Pusat Statistik, 2022). **Land area.** The land area and red onion production of Payung Village is the highest onion producing area in Payung District. According to BPS, the area of harvested land for shallots in Payung District in 2021 will increase the area of harvested land to 158 Ha. **Farmer Capital.** Capital is the main resource in carrying out horticultural crop cultivation, including shallot farming. Where limited capital is an inhibiting factor or weakness for shallot farmers in developing shallot farming Red Onion Seeds. Shallot seeds determine the superiority of a shallot commodity. Superior seeds tend to produce products of good quality. The superior the shallot commodity seeds, the higher the shallot production achieved. **Input Usage.** The use of shallot seeds has started with the use of seeds originating from outside the region. For fertilizer use, we also use organic fertilizer, not relying on chemical fertilizers. The use of plastic mulch has also been used by Payung Village farmers. **Farmer Partnership.** Partnership patterns between shallot farmers and independent investors need to be studied, refined and improved so that handling is more effective. This is aimed at optimizing training for shallot farmers (Sitinjak et al., 2021).

External Factor Analysis: Market Demand. Shallots are a seasonal crop that is planted in the dry season and at the end of the rainy season, so their availability can change on the market which can cause price fluctuations. Market demand for shallots continues to increase over time, so shallot production must be increased (G. Mohan Naik, P. Abhirami, 2020). **Benefits of Shallot Farming.** Onion farmers grow onions based on their experience, farmers do not predict how their farming profits will increase. Information on financial management in farming is very lacking. Sometimes farmers have the principle that returning capital to their farming business is normal for them. Even though they get small profits, the farmers feel grateful (Kurniati, 2019).

3.2 Discussion

3.2.1 Internal and External Factor Evaluation Matrix

The IFAS and EFAS tables present the findings from identifying internal factors, such as strengths and weaknesses, as well as external ones, such as opportunities and threats. To demonstrate how well the response addresses the strategic aspects, scores are assigned to each internal and external strategic factor.

Table 2 demonstrates that the total strength and weakness scores differ by 1.15 or positive ($x \geq 0$), indicating that the strength factor is the most dominant with a value of 0.20 and that the strength aspect is greater than the weakness aspect in the development of shallot farming in the research area. While the most prevalent vulnerability element is farmer capital with a value of 0.15.

Table 2. IFAS Table for Development of Shallot Farming in Payung Village, Payung District

No	Parameter	Weight	Average Score	Score Weighted
Strength				
1	Natural resources	0.20	4	0.80
2	Farmer Experience	0.15	4	0.60
3	Red onion production	0.10	3	0.30
4	Land area	0.10	3	0.30
	Total Strength Score	0.55		2.30
Weakness				
5	Farmer Capital	0.15	3	0.45
6	Red onion seeds	0.10	3	0.30
7	Input usage	0.10	2	0.20
8	Farmer Partnership	0.10	2	0.20
	Total Weakness Score	0.45		1.15
Strengths – Weaknesses Score Difference				1,15
Total Strengths + Weaknesses Score		1.00		

The results of calculating external weighted scores in the development of shallot farming in the research area can be seen in table 3.

Table 3. EFAS Table for Development of Shallot Farming in Payung Village, Payung District

No	Parameters	Weight	Average Score	Score Weighted
Opportunity				
1	Market Demand	0,25	4	1.00
2	Farming Profits	0,15	3	0.45
3	Agro-industry infrastructure and supporting facilities	0,15	3	0.45
4	Support from farmer groups and extension workers	0,10	2	0.20
	Total Opportunity Score	0,65		2.10
Threat				
Environmental Factors				
Market Access				
5	Total Threat Score	0.25	4	1.00
6		0.10	3	0.3
		0.35		1.3
Opportunity – Threat Score Difference				0.80
Total Opportunity + Threat Score		1.00		

Table 3 presents the difference between the overall score of opportunities and threats, which is 0.80 or in the positive region ($x \geq 0$). This indicates that there are more chances than risks for shallot farming to flourish in the research area. Additionally, market demand, with a value of 1.00, is the most important opportunity element, whereas environmental issues, with a value of 1.00, are the most important danger factor.

3.2.2 Determining Strategy with the SWOT Matrix

Using an internal (strengths and weaknesses) and external (opportunities and threats) matrix, a SWOT matrix is created as part of the strategy to accelerate the development of shallot farming. The weight of each internal and external element was determined, and the study area's strategic position for shallot farming development was then determined through the use of a position matrix analysis.

The $Y \geq 0$ value is 0.80 and the $X \geq 0$ value is 1.15 based on Tables 1 and 2. In Cartesian coordinates, the coordinate point's location is as follows.

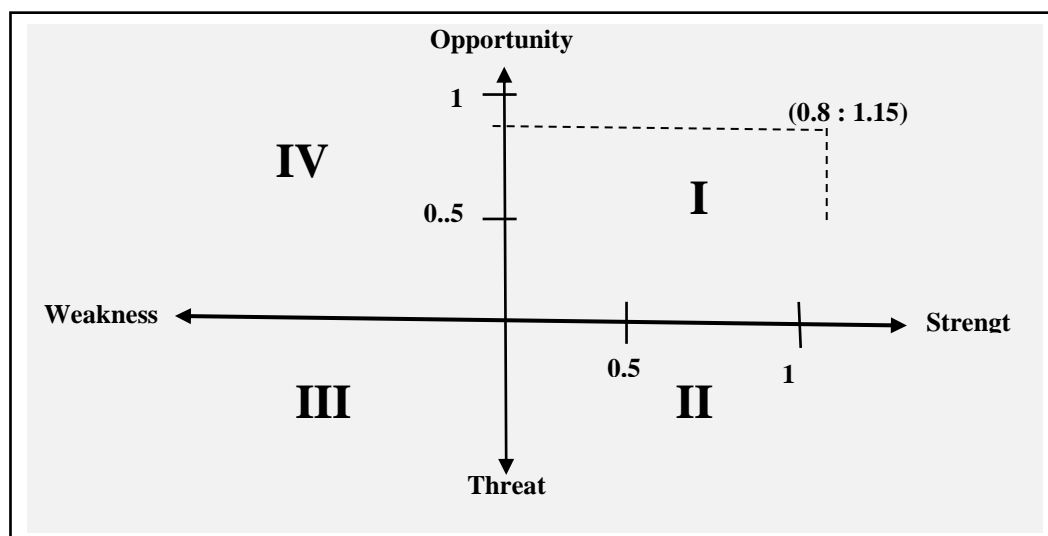


Figure 1. SWOT Quadrant of Shallot Farming Development Strategy in Payung Village, Payung District

The following are the tactics used to advance shallot farming by making use of the opportunities and strengths already present: To fulfill the demand of both the domestic and global markets, make greater use of the natural resources now available (i.e., environments that are conducive to shallot cultivation) and enhance shallot production. Utilize the declining experience of farmers to increase farming profits and meet market demand. Expanding onion cultivation land to increase shallot production by using infrastructure and supporting facilities for agro-industry as well as the supporting role of farmer groups and extension workers (Samodro & Yuliawati, 2018).

The following are the tactics used to minimize vulnerabilities and seize opportunities in order to enhance shallot farming in the research area: Farmers' capital can be made effective and efficient by using agro-industry infrastructure and supporting facilities to increase farming profits. Use of farmer inputs and partnerships by utilizing agro-industry supporting infrastructure and facilities along with the support of farmer groups and extension workers; Increase the use of superior shallot seeds

with the participation of support from farmer groups and extension workers and increase the profits of onion farming (Ritonga Husni et al., 2018).

The following are the methods for expanding shallot farming in the study area by focusing on advantages rather than disadvantages: Utilize farmers' experience in farming and natural resources to overcome environmental factors; Maintaining the quality of shallot production and increasing knowledge and experience in accessing the market (Binjai & Utara, 2023).

The strategies for developing shallot farming in the research area by minimizing weaknesses and threats are as follows: Increasing the use of shallot seeds that are resistant to threats from environmental factors and improving the use of better inputs; Increasing farmer partnerships to gain market access (Darmawan, 2018).

Table 4. Determining the Shallot Farming Development Strategy in Payung Village

Internal Eksternal	Strength (S) 1. Natural Resources 2. Farmer Experience 3. Shallot Production 4. Land area	Weakness (W) 1. Farmer Capital 2. Shallot Seeds 3. Input Usage 4. Farmer Partnership
Chance (O) 1. Market Demand 2. Farming Profits 3. Infrastructure and Facilities Agroindustry Supporter 4. Support for farmer groups and extension workers	S.O 1. Leverage Natural resources exist and improve onion production, so it can be fulfilled market demand (S1, S3, O1) 2. Utilize Farmers' Experience in increase profits and farming and meeting demand market (S2, O2, O1) 3. Expanding the internal land increased production shallots with infrastructure use and supporting facilities agroindustry too group support role farming and labor instructor. (S4, S3, O4, O3)	W.O 1. Farmers' capital can be obtained make it effective and efficient by using infrastructure and supporting facilities for agro-industry in increasing farming profits (W1, O3, O2) 2. Use of input and farmer partnership with utilize infrastructure and supporting facilities agroindustry along with support from farmer groups and extension staff (W3, W4, O3, O4) 3. Increase the use of shallot seeds excel with participation support from farmer groups and extension workers and improve onion farming profits (W2, O4, O2)
Threat (T) 1. Environmental Factors 2. Market Access	S.T 1. Leverage Farmers' Experience in farming and natural resources to overcome environmental factors (S2, S1, T1) 2. Maintaining the quality of onion production red and increase knowledge and experience of accessing the market (S3, S2, T2)	W.T 1. Increased usage shallot seeds which is resistant to threats from environmental factors and improves use more input Good (W2, T2W3, W4) 2. Increasing partnerships farmers to enter market access. (W4, T2)

4. CONCLUSION

Internal factors for the development of shallot farming: Internal factors that become strengths are natural resource parameters, farmer experience parameters, shallot production parameters and land area parameters. The dominant force influencing the development of shallot farming in the research area is natural resources; Internal factors that are weaknesses are farmer capital parameters, shallot seed parameters, input use parameters and farmer partnership parameters. The most dominant weakness is farmer capital.

External factors for the development of shallot farming in the research area: External factors of opportunity are market demand parameters, farming profit parameters, infrastructure parameters and agro-industry supporting facilities and group support parameters and extension workers. The most dominant opportunity is market demand; External threat factors are environmental factors and market access parameters. The most dominant threat is environmental factors.

The natural resources in Payung village can support more advanced onion farming. By opening financial institutions such as cooperatives, credit unions and banks to help with capital for shallot

farmers. Market demand for shallots can be handled with an agribusiness system from upstream to downstream. The environmental factors in Payung Village are more developed for shallot farming.

ACKNOWLEDGEMENTS

Thank you to LPPM Panca Budi Development University for supporting the completion of the 2024 Internal Grant research.

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