

Analysis of Water Spinach's Marketing with Organic Fertilizer in Sidokaton Village

Muhammad Nurus Sholikhin^{1*}, Zulfikar²

^{1,2}Agribusiness, Universitas KH. A. Wahab Hasbullah

*Email: nurussholikhin3@gmail.com

ABSTRACT

This study aims to analyze the marketing strategy of upland water spinach cultivated using organic fertilizer in Sidokaton Village, Kudu District, Jombang Regency. The research used a descriptive quantitative approach with data collected through observation, interviews, questionnaires, and documentation. The respondents consisted of 46 farmers who cultivate upland water spinach using organic fertilizer. Data analysis was conducted using SWOT analysis supported by Internal Factor Analysis Summary (IFAS) and External Factor Analysis Summary (EFAS), while strategy prioritization was determined using the Quantitative Strategic Planning Matrix (QSPM). The analysis shows that the business's main strengths lie in product quality, efficient production costs, and mastery of cultivation techniques. Meanwhile, key weaknesses include low product shelf life and distribution effectiveness. Externally, business opportunities are supported by increasing consumer awareness of healthy vegetable consumption, local market potential, and marketing partnership opportunities, while the main threats come from price competition and climate change. The SWOT matrix results yielded four alternative strategies: SO, WO, ST, and WT. Based on the QSPM analysis, the SO strategy, which involves optimizing production quality and efficiency to capitalize on market opportunities, achieved the highest Total Attractiveness Score (TAS) of 3.50, making it a priority strategy. The research findings indicate that improving product quality and production efficiency are key factors in enhancing the competitiveness and sustainability of horticultural businesses. This research is expected to inform strategic decision-making in the development of sustainable agribusiness-based agricultural businesses.

Keywords: SWOT, QSPM, water spinach, business development strategy, horticultural agribusiness

INTRODUCTION

Indonesia is a tropical country with favorable environmental conditions for agricultural development (Anggraini, 2024). The agricultural sector plays an important role in supporting national food security, employment opportunities, and rural economic growth (Zulkarnain et al., 2025). One of the important agricultural subsectors is horticulture, particularly vegetable commodities that have relatively short production cycles and stable market demand (Pratama et al., 2022). Upland water spinach (*Ipomoea reptans*) is one of the horticultural crops widely cultivated by farmers because it is easy to grow and has significant economic value.

The success of agricultural commodities is not only determined by production activities but also by effective marketing systems (Hidayati & Suryani, 2023). Marketing activities include product distribution, price formation, and the involvement of marketing institutions that connect producers with consumers. Inefficient marketing systems may reduce the income received by farmers and weaken their bargaining position in the market (Pratama et al., 2022).

Currently, there is increasing consumer awareness of healthy food consumption, encouraging the development of organic-based agricultural products (Rahmawati et al., 2023). Organic fertilizer use can improve soil fertility and produce healthier crops that are safer for consumption (Rahmawati et al., 2023). In addition, organic vegetables have greater market appeal because they are perceived as environmentally friendly and beneficial for health.

Sidokaton Village in Kudu District, Jombang Regency, is one of the agricultural areas where farmers cultivate upland water spinach using organic fertilizer. However, farmers still face several challenges

related to marketing activities, including limited promotion, distribution constraints, and price competition with non-organic products. Therefore, it is necessary to analyze the internal and external factors affecting the marketing system and formulate appropriate strategies to improve the competitiveness of organic water spinach products.

Based on these conditions, this study aims to analyze the marketing strategy of upland water spinach cultivated using organic fertilizer in Sidokaton Village using SWOT analysis and determine the priority strategy using the Quantitative Strategic Planning Matrix (QSPM).

METHOD

This study used a descriptive quantitative approach to analyze the marketing conditions of upland water spinach cultivated using organic fertilizer (Sugiyono, 2020). The research was conducted in Sidokaton Village, Kudu District, Jombang Regency from October to November 2025. The research location was selected because it is one of the areas where farmers actively cultivate and market upland water spinach.

The population consisted of farmers who cultivate upland water spinach using organic fertilizer. Sampling was conducted using purposive sampling, with a total of 46 respondents. Data were collected through questionnaires, interviews, observation, and documentation.

The data analysis technique used SWOT analysis to identify internal and external factors influencing marketing activities (Rangkuti, 2020). Internal factors include strengths and weaknesses, while external factors include opportunities and threats. The results were compiled into IFAS and EFAS matrices to determine the strategic position of the business.

Furthermore, alternative strategies obtained from the SWOT matrix were evaluated using the Quantitative Strategic Planning Matrix (QSPM) to determine the most appropriate marketing strategy based on the Total Attractiveness Score (TAS) (David, 2023).

RESULT AND DISCUSSION

Result

Analisis SWOT

A SWOT analysis was conducted to identify internal and external factors affecting the development of the land kale business. Internal factors comprise strengths and weaknesses, while external factors encompass opportunities and threats. The identification results indicate that the business's primary strengths lie in the quality of the land kale, efficient production costs, and mastery of cultivation techniques. Key weaknesses include low product shelf life and distribution effectiveness.

Table 1 SWOT Matrix

IFAS EFAS	Strengths	Weakness
	1. Quality of land spinach 2. Production cost efficiency 3. Mastery of cultivation techniques	1. Product shelf life 2. Distribution effectiveness
Opportunities 1. Consumer awareness 2. Local market potential 3. Marketing partnerships	SO Strategy Optimizing production quality and efficiency for market opportunities	Strategi WO Strategy Increased distribution effectiveness for market expansion
Threats 1. Price competition 2. Climate change	ST Strategy Strengthening product quality to face competition	WT Strategy Strengthening production management to minimize business risksa

Externally, business opportunities are supported by increasing consumer awareness of healthy vegetable consumption, a large local market potential, and opportunities for marketing partnerships. However, the business also faces threats such as price competition and climate change, which can impact agricultural productivity.

Based on the SWOT matrix, four alternative strategies were identified: SO, WO, ST, and WT. The SO strategy focuses on optimizing production quality and efficiency to capitalize on market opportunities. This strategy is considered the most promising because product quality and production efficiency are key factors in increasing the competitiveness of horticultural businesses. Improving harvest quality, efficient use of resources, and the implementation of modern cultivation techniques can strengthen the product's position in the market.

The WO strategy focuses on increasing distribution effectiveness to expand the market. Improving the distribution system is crucial because horticultural products are perishable, requiring a fast and efficient distribution chain. This strategy can be implemented through strengthening marketing networks and utilizing digital platforms.

The ST strategy focuses on enhancing product quality to face price competition. Product quality is a differentiating factor that can increase consumer loyalty amidst intense market competition. Efforts include quality standardization, improved packaging, and product quality control.

Meanwhile, the WT strategy emphasizes strengthening production management to minimize business risks caused by climate change and market volatility. This strategy is implemented through more structured production management, quality control, and agricultural business risk management.

Overall, the analysis results indicate that the SO strategy is the most promising strategy to implement because it optimally leverages internal strengths and external opportunities. This finding aligns with research by Rahman et al. (2023), which states that product quality and production efficiency are important factors in increasing the competitiveness of horticultural agribusiness.

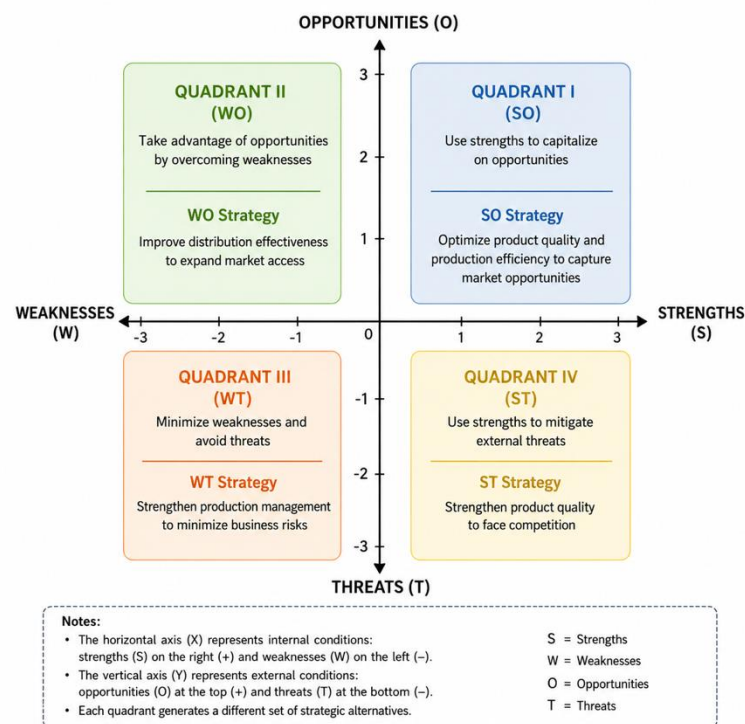


Figure 1. SWOT Strategy Matrix for the Development of Water Spinach (*Ipomoea aquatica*) Business.

Figure 1. SWOT Matrix

The SWOT matrix analysis in Figure 1 shows that the land kale business development strategy is dominated by the SO (Strengths-Opportunities) strategy, which leverages internal strengths to seize external opportunities. The main strengths, including product quality, production cost efficiency, and mastery of cultivation techniques, support the utilization of increasing market opportunities due to increasing consumer awareness of healthy horticultural products. Furthermore, the WO strategy emphasizes distribution improvements, the ST strategy focuses on strengthening product quality to face competition,

and the WT strategy focuses on strengthening production management to minimize business risks. Overall, this matrix indicates that optimizing production quality and efficiency is the most prospective strategy for increasing the competitiveness and sustainability of horticultural farming businesses (Rahman et al., 2023; Nguyen et al., 2024).

Quantitative Strategic Planning Matrix (QSPM) Analysis

The analysis of the land spinach business development strategy was conducted using the Quantitative Strategic Planning Matrix (QSPM) method. This method is used to determine strategic priorities based on previously identified internal and external factors. The main factors used in the analysis include the physical quality of the land spinach, production cost efficiency, distribution effectiveness, local market potential, and price competition.

Based on the QSPM calculation results, four alternative strategies were identified: (1) optimizing production quality and efficiency (SO), (2) increasing distribution effectiveness (WO), (3) strengthening product quality (ST), and (4) strengthening production management (WT). The total Attractiveness Score (TAS) for each strategy is presented in the following table.

Table 2 Quantitative Strategic Planning Matrix (QSPM)

Strategy	Total of TAS	Level
Optimizing production quality and efficiency (SO)	3,50	1
Strengthening product quality (ST)	3,17	2
Strengthening production management (WT)	2,99	3
Improving distribution effectiveness (WO)	2,67	4

The analysis results show that the optimization of quality and production efficiency (SO) strategy achieved the highest TAS score of 3.50. This score indicates that the SO strategy is the most attractive and feasible alternative for developing the land kale business. This strategy is considered capable of leveraging internal strengths while effectively responding to market opportunities.

The second strategy with a relatively high score is product quality enhancement (ST), with a TAS score of 3.17. This strategy emphasizes improving product quality to address the threat of price competition in the market. Furthermore, the strengthening of production management (WT) strategy achieved a TAS score of 2.99, while the increasing distribution effectiveness (WO) strategy achieved the lowest TAS score of 2.67.

Discussion

The SWOT analysis results indicate that the land kale business has significant development potential, supported by product quality, cost efficiency, and broad market opportunities. The most promising strategy is the SO strategy, as it leverages internal strengths to optimally capture market opportunities. In general, the success of horticultural business development is determined not only by production capacity but also by product quality, distribution efficiency, business management, and the ability to adapt to changes in the external environment. Therefore, strategy implementation needs to be integrated to sustainably enhance business competitiveness. These findings align with research by Rahman et al. (2023), which states that product quality and production efficiency are key factors in enhancing the competitiveness of horticultural agribusinesses. Furthermore, research by Nguyen et al. (2024) shows that strengthening the supply chain and production management can improve agricultural business stability in dynamic market conditions.

The results of the strategic development analysis indicate that product quality and production efficiency are the dominant factors in determining the success of the land kale business development strategy. The SO strategy received the highest score due to its combination of good physical product quality, efficient production costs, and high local market potential. This indicates that improving production quality coupled with operational efficiency can enhance the competitiveness of agricultural products in local and regional markets. Distribution effectiveness and price competition received the highest weighting in the QSPM matrix, at 0.25. This indicates that distribution and pricing are strategic factors that significantly influence the sustainability of horticultural farming businesses. However, despite the high weighting of distribution, the WO strategy received the lowest TAS score. This indicates that improving distribution alone is insufficient if it is not accompanied by improvements in product quality and production efficiency.

This finding aligns with research by Rahman et al. (2023), which states that production efficiency and product quality are key determinants of increasing the competitiveness of modern agribusinesses.

Furthermore, research by Chen and Lin (2024) shows that optimizing product quality can increase consumer loyalty and strengthen the market position of local agricultural products.

The ST strategy, with a TAS score of 3.17, demonstrates that strengthening product quality can be an important strategy in facing price competition. In competitive market conditions, consumers tend to choose better quality products even if they have a relatively higher price. Therefore, improving harvest quality, standardizing quality, and innovative packaging are strategic steps that require attention.

Meanwhile, a WT strategy that focuses on strengthening production management also plays a crucial role in maintaining business stability. Good production management can improve resource efficiency, reduce waste, and maintain consistent product quality. According to Nguyen et al. (2023), implementing effective production management can increase agricultural sector productivity by 20–30%. Overall, the QSPM analysis results indicate that the main priorities for developing land kale businesses are improving product quality and production efficiency. This strategy is considered the most adaptive to market conditions and capable of sustainably enhancing business competitiveness.

CONCLUSIONS

Based on the results of the SWOT and QSPM analysis, the land kale business has quite strong development potential because it is supported by product quality, production cost efficiency, and increasing horticultural market opportunities. The most recommended priority strategy is the SO (Strengths-Opportunities) strategy, namely optimizing production quality and efficiency to take advantage of market opportunities, with the highest Total Attractiveness Score (TAS) of 3.50. The results of the study indicate that improving product quality, production efficiency, and strengthening the distribution system are important factors in increasing business competitiveness and sustainability. In addition, strengthening production management and adaptation to price competition and climate change are needed to minimize long-term business risks. Thus, the implementation of an integrated strategy between aspects of production, quality, distribution, and business management can be the basis for developing a more competitive and sustainable land kale agribusiness.

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