

# 2-MARKETING STRATEGY OF HYDROPONIC VEGETABLES A CASE STUDY

*by Hamdani \**

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## MARKETING STRATEGY OF HYDROPONIC VEGETABLES: A CASE STUDY OF BANJARBARU HYDROPONIC GARDEN

Wulandari Anis\*, Fajeri Hairin, Hamdani

Master's Program of Agricultural Economics, Faculty of Agriculture, University of Lambung  
Mangkurat, Banjarbaru, South Kalimantan, Indonesia

\*E-mail: [aniswulandari550@gmail.com](mailto:aniswulandari550@gmail.com)

### ABSTRACT

Hydroponics is the term used for a soilless cultivation technology. Strategy is an important factor for the sustainability of a company in achieving effective and efficient goals or objectives. The objective of this research is to explain and analyze the internal and external factors that constitute the strengths, weaknesses, opportunities, and threats faced in the marketing of Hydroponic Vegetables at the Hydroponic Garden in Banjarbaru. Additionally, it aims to analyze marketing strategies and formulate alternative strategies in the marketing of Hydroponic Vegetables at the Hydroponic Garden in Banjarbaru. This research is a combination of qualitative and quantitative approaches with hydroponic vegetables as the research object. Sampling is conducted using nonprobability sampling, also known as saturation sampling. Data collection techniques include observation, interviews, and documentary studies. Then, an analysis of internal and external factors was conducted using the SWOT method. The research findings revealed the *Internal Factors (strengths and weaknesses)* as follows: (1) Strengths consist of maintaining quantity and quality and providing excellent customer service. (2) Weaknesses consist of limited land area and uncertain production quantities. *The External Factors (opportunities and threats)* are as follows: Opportunities consist of high vegetable demand, while Threats consist of price competition from competitors, pests, and diseases. *An alternative strategy* that can be used to enhance marketing is to collaborate with potential hydroponic farmers who produce high-quality vegetables to meet the vegetable supply, considering the limited product variations and land constraints due to consistently high vegetable demand. Additionally, this strategy aims to build consumer trust by ensuring the availability of specific vegetable types in the market (O2, O3, W5, W2).

### KEY WORDS

Hydroponic vegetables, marketing strategy, SWOT analysis.

Indonesia is one of the countries that has experienced a rapid increase in entrepreneurship. Entrepreneurship has resilience as a driver of the economy for both the community and the region. This can be seen from the continuous creation and development of new innovations, indicating that business players are capable and able to transform challenges into opportunities through their ideas and eventually turn them into a business. The emergence of supermarkets has led to certain vegetables that were previously not significant (such as sweet corn, broccoli, Japanese cucumber, lettuce, mushrooms) gaining a good market presence. Along with that, vegetable businesses adopting agribusiness patterns with advanced technologies such as hydroponic cultivation have also flourished (Zulkarnain, 2014).

According to David (2011), strategy refers to shared goals and long-term objectives to be achieved. Business strategy encompasses geographic expansion, diversification, acquisitions, product development, market penetration, retrenchment, divestiture, liquidation, and joint ventures. Strategy is a potential action that requires top management decisions and significant company resources.

South Kalimantan is a province with significant potential in the agricultural sector, thanks to its vast and fertile land. Banjarbaru is a city that holds great potential for agricultural business development and promising ventures in the field of agriculture, particularly in the



hydroponic system. Lettuce and pakchoi are horticultural products with potential for development due to the interest and adoption of healthy lifestyles by the community of Banjarbaru. These vegetables contain important substances that are beneficial for the body, such as proteins, carbohydrates, water, minerals, and fiber. Vegetables contain various nutrients that play a crucial role in maintaining the body's metabolism and preventing health disorders.

In the city of Banjarbaru, hydroponic vegetables have become a promising business opportunity, especially for hydroponic farmers, both beginners and experienced ones. This is evident from the presence of various supermarkets in Banjarbaru that already offer a wide range of hydroponic vegetables. The increasing number of new hydroponic farmers poses a threat to the Banjarbaru Hydroponic Garden. After conducting interviews and direct surveys with the owners, it was found that the Banjarbaru Hydroponic Garden produced various vegetables such as pakchoi, mustard greens, lettuce, water spinach, mint leaves, and romaine lettuce from 2014 to 2019. However, in the following years, the Banjarbaru Hydroponic Garden did not produce water spinach and mustard greens. Due to the low demand and the preference of the general public for conventional vegetables over hydroponic vegetables such as water spinach and mustard greens. Afterward, the Banjarbaru Hydroponic Garden focused solely on lettuce cultivation due to the consistently high interest and demand over the years. Currently, the Banjarbaru Hydroponic Garden also cultivates pakchoi, mint leaves, and romaine lettuce, but only in limited quantities. As a result, the Banjarbaru Hydroponic Garden continues to produce lettuce continuously.

The advantages of hydroponic cultivation are as follows: (1) Ensured success in plant growth and increased productivity, (2) More practical maintenance and better pest control, (3) Efficient use of fertilizers, leading to cost savings, (4) Easy replacement of dead plants with new ones, (5) Reduced labor requirement due to streamlined and standardized working methods, (6) Plants can grow more rapidly and in a clean and undamaged condition, (7) Continuous and higher production compared to soil cultivation, (8) Hydroponic products fetch higher prices than non-hydroponic products, (9) Some plant varieties can be cultivated out of season, (10) No risk of flooding, erosion, drought, or dependence on natural conditions, (11) Hydroponic cultivation can be done in limited land or space, such as on rooftops, in kitchens, or garages (Roidah, 2014).

Alongside the advancement of science and increasing public awareness regarding the importance of health, vegetables produced without the use of pesticides are being increasingly chosen by the community for daily consumption. As agricultural land continues to diminish, while the demand for food production from agriculture increases, this situation urges the agricultural sector to address these challenges. By enhancing the implementation of small-scale farming systems, the agricultural sector aims to overcome these challenges. One such system that is currently being utilized is the use of hydroponic cultivation technology.

There are objectives of this research:

- To explain and analyze the internal and external factors that are the strengths, weaknesses, opportunities, and threats to be faced in the marketing of hydroponic vegetables at the Banjarbaru Hydroponic Garden;
- To analyze marketing strategies and formulate alternative strategies for marketing hydroponic vegetables at the Banjarbaru Hydroponic Garden.

The benefits are as follows:

- For researchers, this research is expected to provide additional knowledge and experience;
- For marketing practitioners, this research is expected to contribute ideas and considerations in developing marketing strategies.

## **METHODS OF RESEARCH**

This research was conducted in the city of Banjarbaru. The research was carried out from January 2023 until completion, including proposal writing, data collection, analysis and



discussion, and the final research report.

In this research, the data sources are primary data and secondary data:

- Primary data refers to data directly obtained from the respondents through interviews related to the research problem;
- Secondary data refers to data obtained from external sources that are related to the research problem, and they serve as supporting or supplementary information.

The respondents in this research include the owners of the Banjarbaru Hydroponic Garden, commissioners, treasurers, and employees involved in managing the Banjarbaru Hydroponic Garden. The results of interview observations from the respondents will be processed and analyzed in a detailed and in-depth manner. The sampling method used is saturated or nonprobability sampling, where the entire population is included as the sample.

To address the first research question, the following method was employed:

- Analysis of EFE Matrix and IFE Matrix. This stage is referred to as the input stage, which summarizes the fundamental input information needed to formulate strategies. After that, the second stage is used;
- Matching Stage, focuses on generating viable alternative strategies by aligning key internal and external factors. Technique stage 2 includes the SWOT Matrix, which involves identifying the Internal and External environments. The Analysis of the Internal Environment covers Strengths (S) and Weaknesses (W), while the Analysis of the External Environment consists of Opportunities (O) and Threats (T). By creating a SWOT matrix, we can identify internal and external issues and determine strategies (SWOT). Then, the total scores from the IFE and EFE matrices are summed up, resulting in the Internal External (IE) matrix;
- Decision Stage, involves a single technique called the Quantitative Strategic Planning Matrix (QSPM).

QSPM utilizes objective input information from stage 1 to evaluate alternative strategies identified in stage 2. QSPM reveals the relative attractiveness of alternative strategies and provides an objective basis for selecting a specific strategy.

The steps involved in identifying external environmental factors in the IFE matrix and EFE matrix are as follows:

- Write down the key Internal and External factors as identified in the Internal and External audit processes;
- Assign weights ranging from 0.0 (not important) to 1.0 (very important) to each factor, indicating the relative importance level of the factor to the company's success in the industry. The total sum of all weights should be equal to 1.0;
- Assign rankings from 1 to 4 to each factor to indicate whether the factor exhibits major weaknesses (rank = 1), minor weaknesses (rank = 2), minor strengths (rank = 3), or major strengths (rank = 4). Note that strengths should receive a rank of 3 or 4, while weaknesses should receive a rank of 1 or 2. Therefore, rankings are based on the company, while weights are based on the industry;
- Multiply each factor weight by its ranking to determine the weighted average for each variable;
- Sum up the weighted averages for each variable to determine the total weighted average for the organization. A mean score of 2.5 is considered the average. A total weighted average below 2.5 indicates a weak internal and external position for the organization, while a total score above 2.5 indicates a strong internal and external position.

## RESULTS AND DISCUSSION

The hydroponic vegetable garden in Banjarbaru is the only hydroponic garden with a land area of 0.1 hectares, focusing on cultivating hydroponic lettuce. This means that the Banjarbaru hydroponic garden is the largest hydroponic garden in South Kalimantan. The Banjarbaru hydroponic garden was established on November 26, 2014, located on Karang



Jati Street, Banjarbaru City, South Kalimantan Province. The initial idea for this hydroponic business came from a young man named Ferly Yandra Gunawan, who had a hobby for hydroponic plants, which he found unique. Mr. Ferly is a self-taught farmer without a background in agricultural education. He started his hydroponic business with an initial capital of Rp 500,000. This hobby eventually generated significant profits, but he didn't achieve success immediately.

In the early stages of hydroponic vegetable cultivation, Mr. Ferly experienced failures. Some of his hydroponic gardens even died, and at one point, he had to drastically reduce prices during harvest time. There were instances where Mr. Ferly's harvested vegetables became worthless and had to be discarded due to failed yields. The lack of a mentor and relying solely on knowledge from YouTube videos were major contributing factors to Mr. Ferly's business failures. However, through numerous failures and experiences, this hydroponic garden eventually succeeded in cultivating widely recognized and highly valued hydroponic vegetables.

After achieving success, Mr. Ferly's hydroponic vegetable garden ventured into cultivating hydroponic vegetables on a larger scale for commercial purposes. This was driven by the significant potential of hydroponics in the city of Banjarbaru. Initially, the hydroponic vegetable garden started by marketing its products to small local restaurants in the vicinity, and also expanded its market to small cafes. As of now, the marketing efforts have encompassed the areas of Banjarbaru, Banjarmasin, and Martapura.

Vision and Mission of Banjarbaru Hydroponic Garden:

- Vision: Let us embrace a healthy lifestyle by continuously consuming hydroponic vegetables;
- Mission: To consistently strive to develop and promote the positive benefits of hydroponic vegetables to the community.

Table 1 – Products of Banjarbaru Hydroponic Garden

No	Product	Volume	Prices
1.	Pakchoy	1 kg	Rp. 25.000,00
2.	Roment	1kg	Rp 30.000,00
3.	Daunt Mint	1 kg	Rp. 80.000,00
4.	Lettuce	1 kg	Rp. 35.000,00

Table 2 – Sales data of hydroponic vegetables at Banjarbaru Hydroponic Garden from 2020 to 2022

Year	Types Of Hydroponic Vegetables At Banjarbaru Hydroponic Garden.			
	Pakcoy (Volume)	Lettuce (Volume)	Roment (Volume)	Daun Mint (Volume)
2020	444	2.515	406	216
2021	3.892	2.665	388	286
2022	3.170	12.760	2.288	159

Source: Archives of Banjarbaru Hydroponic Garden.

Based on the table above, it can be observed that the demand for products at Banjarbaru Hydroponic Garden has increased over the years. However, it is evident from interviews conducted that the magnitude of the increase is inconsistent. This inconsistency in demand and revenue can be attributed to the impact of the COVID-19 pandemic that struck Indonesia in 2020. The pandemic affected the restaurant and hospitality sector, leading to a decrease in demand. Hence, the demand for products at Banjarbaru Hydroponic Garden was significantly influenced by these circumstances.

Mr. Ferly's hydroponic vegetable business, however, experienced consistently high and rapid growth in demand after the year 2020 and 2022. It can be observed that from 2020 to 2022, the demand for lettuce, in particular, continued to increase due to the public's interest in consuming foods such as salad, kebabs, and dining at Japanese and Korean restaurants. This trend has led to an increasing opportunity for hydroponic lettuce compared to other vegetables. Therefore, Banjarbaru Hydroponic Garden focuses primarily on cultivating lettuce, while also growing a portion of pakchoy, daunt mint, and roment.



Identification of Internal Factors Evaluation (IFE) allows for the identification of strengths and weaknesses possessed by Banjarbaru Hydroponic Garden.

Table 3 – Identification of strengths and weaknesses

Key Internal Factors	Weight	Rating	Total Score
<b>Strengths</b>			
1. Maintaining Quantity and Quality	0,12	4	0,48
2. Hydroponic farmers have expertise in developing cultivation techniques.	0,09	3	0,27
3. Using high-quality seedlings	0,09	3	0,27
4. Providing excellent customer service	0,12	4	0,48
5. The human resources available are sufficiently adequate	0,09	3	0,27
<b>Total</b>			<b>1,77</b>
<b>Weakness</b>			
1. Online promotion is less active.	0,07	2	0,14
2. Limited land area.	0,12	4	0,48
3. Inconsistent production quantity.	0,12	4	0,48
4. Requires high production costs.	0,10	3	0,3
5. Lack of innovation and product variety.	0,08	2	0,16
<b>Total</b>	<b>1,0</b>		<b>1,56</b>
<b>Point X = Total Strength Value - Total Weakness Value = 1.77 - 1.56 = 0.21</b>			

Based on Table 3, the calculation results of the IFE matrix indicate that the main strengths in marketing hydroponic vegetables at the Banjarbaru Hydroponic Garden with a score of 0.48 are: 1) prioritizing quality and quantity, and 2) providing good service to consumers. As for the internal strategic factors, one of the main weaknesses of Banjarbaru Hydroponic Vegetables is: 1) limited land area, and 2) inconsistent vegetable production, with a score of 0.48.

The analysis result of the IFE matrix shows a score of 1.77 for strengths and a score of 1.56 for weaknesses. Therefore, the total score for the internal position is 3.33, indicating that the internal position of the hydroponic garden business is strong. The total score of the internal and external matrix weights ranges from 1.0 to 4.0, with an average score of 2.5. Scores above 2.5 indicate a strong organization internally and externally, while scores below 2.5 indicate a weak position (David, 2009).

Based on the identification of *External Factors Evaluation* (EFE) factors, opportunities and threats for Banjarbaru Hydroponic Garden have been obtained. The results of the external factor analysis (EFE) for Banjarbaru Hydroponic Garden can be seen in Table 4.

Table 4 – EFE (External Factors Evaluation) Matrix for Banjarbaru Hydroponic Garden Business

Key External Factors	Weight	Rating	Total Score
<b>Opportunities</b>			
1. Society is starting to become aware of the importance of a healthy lifestyle by consuming hydroponic vegetables.	0,11	3	0,33
2. Good relationships with potential farmers can help increase market share.	0,08	2	0,16
3. High demand for vegetables.	0,13	4	0,52
4. Wide marketing network.	0,07	2	0,14
5. Strategic hydroponic cultivation location.	0,11	3	0,33
<b>Total</b>			<b>1,48</b>
<b>Threats</b>			
1. Price competition with competitors.	0,13	4	0,52
2. Public perception that hydroponic vegetables are expensive.	0,05	1	0,05
3. Emergence of new competitors.	0,12	3	0,36
4. Unpredictable weather affecting production volume.	0,07	2	0,14
5. Pests and diseases.	0,13	4	0,52
<b>Total</b>	<b>1,0</b>		<b>1,59</b>
<b>Point Y = Total Opportunity Score - Total Threat Score = 1.48 - 1.59 = (-0.11)</b>			

It is known that the calculation results of the EFE matrix indicate that one of the main OPPORTUNITY factors possessed by Banjarbaru Hydroponic Garden is 1).

High vegetable demand with a score of 0.52. The main external strategic factor,



which is a THREAT, includes: 1) Price competition with competitors, and 2) Pests and diseases as inhibiting factors for production, with a score of 0.52. The analysis of the External Factor Evaluation (EFE) matrix resulted in an opportunity score of 1.48 and a threat score of 1.59. Thus, the total score for the External position is 3.07. This indicates that the External Score of Hydroponic Garden Banjarbaru is relatively good in leveraging opportunities, but improvement and the development of strategies that can provide even better impact are expected.

Based on the results obtained from the IFE and EFE matrices, the current position of hydroponic vegetables in Hydroponic Garden Banjarbaru can be determined. Therefore, it is crucial in selecting the established strategies. Based on the analysis conducted, the total score in the IFE matrix for strengths and weaknesses is 3.33, indicating that the internal factors are above average. Meanwhile, the total score in the EFE matrix for opportunities and threats is 3.07, indicating that the external factors are still above average but require a strategy change.

Table 5 – IFE and EFE matrices

IFE		EFE	
Category	Score Total	Category	Score Total
Strengths (S)	1.77	Opportunities (O)	1.48
Weaknesses (W)	1.56	Threats (T)	1.59
Total (S-W)	0.21	Total (O-T)	(-0.11)

SWOT analysis by Pearce and Robinson coordinates the X and Y points. According to Eva and Dian (2011), the SWOT analysis developed by Pearce and Robinson is based on a logic that aims to maximize strengths and opportunities while simultaneously minimizing weaknesses and threats.

Robinson is the determination of X and Y coordinate points, drawing the X and Y coordinate points to determine the quadrant position and formulate strategies based on the quadrant position. The X coordinate point is the result of subtracting the total strength score from the total weakness score in the IFE matrix. Subtracting the total strength score (1.77) from the total weakness score (1.56) gives us the X point (0.21). Based on these values, the X coordinate point is 0.21, and this coordinate point lies on the positive axis or the Strength (S) axis. The Y coordinate point is the result of subtracting the total opportunity score from the total threat score in the EFE matrix. Subtracting the total opportunity score (1.48) from the total threat score (1.59) gives us the Y point (1.217). Based on these values, the Y coordinate point is -0.11, and this coordinate point lies on the negative axis or the Threats (T) axis.

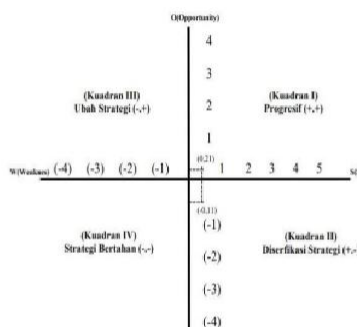


Figure 1 – Diagram Analisis SWOT Berdasarkan

Figure 1, the result of the SWOT matrix analysis shows the coordinates (0.21), which falls into quadrant I. The strategy that can be implemented is to maximize strengths and utilize opportunities. This position indicates that the hydroponic vegetable



business at the Banjarbaru Hydroponic Garden still has strong internal capabilities. The coordinate point (-0.11) is obtained on the axis Y falls into quadrant II, where it faces threats from unfavorable external factors. It is expected to improve and develop strategies that can have a better impact, and have alternative strategies to overcome these challenges.

Based on the analysis of internal and external factors of the business, several alternative strategies can be formulated based on the analysis of the SWOT matrix.

Table 5 – SWOT Matrix Analysis

	(Strength)	(Weakness)
IFE	Maintaining quantity and quality. Hydroponic farmers already have expertise in developing cultivation.	Less active promotion through the internet.
EFE	Using high-quality seedlings. Providing good service. The available human resources are sufficiently adequate.	Limited land area. Uncertain quantity of production. Requires high production costs. Lack of innovation and product variants.
	(Opportunity)	
	Strategy SO	Strategy WO
	The society has started to realize the importance of a healthy lifestyle by consuming hydroponic vegetables. Building good relationships with potential farmers to increase market share. High demand for vegetables. Wide marketing network. Strategic location for hydroponic cultivation.	Utilizing potential hydroponic farmers who have good vegetable quality to meet vegetable stock demands due to the lack of product variants and limited land availability caused by consistently high vegetable demand, and to enhance consumer trust by ensuring availability of various types of vegetables in the market (O2, O3, W5, W2).
	(Threats)	
	Strategy ST	Strategy WT
	Price competition with competitors. Public perception that hydroponic vegetables are expensive. Emergence of new competitors. Uncertain weather affecting the quantity of production. Pests and diseases.	It is recommended to be more active on internet media to create attractive promotions and utilize information media to increase public awareness of the advantages of hydroponic vegetables, emphasizing that they are not expensive and can be enjoyed by all segments of society (W1, W3, T2).

Based on Table 5, the alternative strategies for marketing hydroponic vegetables at the Banjarbaru hydroponic garden can be summarized as follows:

- Strategy SO: Maximizing the use of strategic locations and optimizing existing human resources to expand the marketing network, while maintaining good relationships with potential farmers (S1, S2, O4, O5);
- Strategy SO: Continuously using high-quality seedlings to minimize pest and disease issues, and using pesticides in appropriate quantities, thereby increasing public awareness that hydroponics is a healthy vegetable option (S3, O1);
- Strategy WO: Collaborating with potential hydroponic farmers who have good vegetable quality to meet vegetable stock demands due to the lack of product variants and limited land availability caused by consistently high vegetable demand, and to increase consumer trust by ensuring the availability of various types of vegetables in the market (O2, O3, W5, W2);
- Strategy ST: With experienced human resources, it can add more value against emerging competitors, and by maintaining superior product quality, it can minimize pest attacks (S1, S5, T3, T5);
- Strategy WT: It is recommended to be more active on internet media to create attractive promotions and utilize information media to increase public awareness.

Advantages of hydroponic vegetables and the fact that hydroponic vegetables are not expensive and can be enjoyed by all segments of society (W1, W3, T2).

From the various alternative strategies that have been obtained, one preferred strategy will be selected to be implemented by the farmers. To determine which strategy to use, the QSPM (*Quantitative Strategic Planning Matrix*) analysis, also known as the *quantitative strategic planning matrix*, will be employed. QSPM is a tool that allows for the objective





formulation of strategies based on previously identified internal and external key factors.

In QSPM, the assignment of weights and AS values is objectively considered based on the questionnaire results with the Banjarbaru Hydroponic Garden. The weight values are derived from the EFE and IFE matrices, while AS represents the value that indicates the relative attractiveness for each selected strategy. The TAS table values are obtained by multiplying the weights by the AS values.

The strategic alternatives to be selected for analysis using QSPM are as follows:

- Maximizing the use of strategic locations and optimizing existing human resources to expand the marketing network, while maintaining good relationships with potential farmers (S1, S2, O4, O5);
- Continuously using high-quality seedlings to minimize pest and disease issues, and using pesticides in appropriate quantities, thereby increasing public awareness that hydroponics is a healthy vegetable option (S3, O1);
- Collaborating with potential hydroponic farmers who have good vegetable quality to meet vegetable stock demands due to the lack of product variants and limited land availability caused by high demand, to increase trust among consumers by ensuring the availability of various types of vegetables in the market (O2, O3, W5, W2);
- The presence of experienced human resources can add more value to emerging competitors;
- It is recommended to be more active on internet media to create attractive promotions and utilize information media to increase public awareness of the advantages of hydroponic vegetables, emphasizing that they are not expensive and can be enjoyed by all segments of society (W1, W3, T2).

According to David (2009), the Quantitative Strategic Planning Matrix (QSPM) is used to evaluate and select the best strategy that is most suitable for the external and internal environment. The alternative strategy with the highest total value in the QSPM is considered the most favorable strategy to be implemented for marketing hydroponic vegetables at UMKM Bakoel Sayur.

Table 6 – QSPM processing results

No	Main factors	Weight	Strategy 1		Strategy 2		Strategy 3		Strategy 4		Strategy 5	
			AS	TAS	AS	TAS	AS	TAS	AS	TAS	AS	TAS
<b>Power</b>												
1	Maintaining quantity and quality.	0.12	3	0.36	4	0.48	3	0.36	4	0.48	4	0.48
2	Hydroponic farmers already possess expertise in developing cultivation.	0.09	3	0.27	3	0.27	2	0.18	3	0.27	3	0.27
3	Using high-quality seedlings.	0.09	2	0.18	3	0.27	3	0.27	4	0.36	2	0.18
4	Providing good service.	0.12	3	0.36	4	0.48	4	0.48	4	0.48	3	0.36
5	Having sufficiently adequate human resources.	0.09	3	0.27	3	0.27	4	0.36	3	0.27	2	0.18
<b>Weakness</b>												
1	Less active internet promotion.	0.07	3	0.21	2	0.14	1	0.07	2	0.14	3	0.21
2	Limited land area.	0.12	4	0.48	3	0.36	4	0.48	3	0.36	4	0.48
3	Unpredictable production quantity.	0.12	3	0.36	4	0.48	4	0.48	3	0.36	4	0.48
4	Requires high production costs.	0.10	3	0.3	3	0.3	3	0.3	4	0.4	3	0.3
5	Lack of innovation and product variants.	0.08	2	0.16	2	0.16	3	0.24	2	0.16	3	0.24
<b>Opportunities</b>												
1	The society is increasingly aware of the importance of a healthy lifestyle and consuming hydroponic vegetables.	0.11	2	0.22	4	0.44	4	0.44	3	0.33	2	0.22
2	Establishing good relationships with potential farmers to expand market share.	0.08	2	0.16	2	0.16	3	0.24	3	0.24	2	0.16
3	High demand for vegetables.	0.13	4	0.52	3	0.39	4	0.52	3	0.39	4	0.52
4	Extensive marketing network.	0.07	2	0.14	3	0.21	3	0.21	2	0.14	1	0.07
5	Strategic location for hydroponic cultivation.	0.11	3	0.33	3	0.33	4	0.44	3	0.33	2	0.22
<b>Threats</b>												
1	Competing with competitors in terms of price.	0.13	3	0.39	4	0.52	3	0.39	4	0.52	4	0.52
2	The mindset of the society is that hydroponic vegetables are expensive.	0.05	1	0.05	2	0.1	1	0.05	1	0.05	2	0.1
3	Emergence of new competitors.	0.12	3	0.36	2	0.24	4	0.48	4	0.48	4	0.48
4	Unpredictable weather affects the quantity of production.	0.07	2	0.14	3	0.21	1	0.07	2	0.14	2	0.14
5	Pests and diseases.	0.13	3	0.39	4	0.52	4	0.52	4	0.52	4	0.52
<b>Total</b>		-	-	5.65	6.33	7.03	6.87	-	6.13			

It is shown that the selected priority strategy is Strategy 3, which has the highest TAS score of 7.03. The chosen strategy is to collaborate with potential hydroponic farmers who have good vegetable quality to meet vegetable stock demands due to the lack of product variants and limited land availability caused by consistently high vegetable demand (O2, O3, W5, W2).



The strategy with the highest total score determines that it is selected as the best strategy to be implemented first in marketing hydroponic vegetables at the Banjarbaru hydroponic garden. In addition to that strategy, another strategy that can be implemented is Strategy IV, which emphasizes that experienced human resources can add more value compared to emerging competitors.

Maintaining superior product quality can minimize pest attacks, with a total score of 6.87. Strategy II is to consistently use high-quality seedlings to minimize pest and disease issues, and to use pesticides in appropriate quantities, increasing public awareness that hydroponics is a healthy vegetable option, with a score of 6.33. Strategy V is to be more active on internet media to create attractive promotions and utilize information media to increase public awareness of the advantages of hydroponic vegetables, emphasizing that they are not expensive and can be enjoyed by all segments of society, with a score of 6.13. Strategy I is to maximize the use of strategic locations and optimize existing human resources to expand the marketing network, while maintaining good relationships with potential farmers, with a score of 5.65.

### **CONCLUSION AND SUGGESTIONS**

Based on the analysis of the data and the discussion, the following conclusions can be drawn:

1. Internal factors (strengths and weaknesses):
  - The strengths consist of maintaining quantity and quality and providing excellent customer service;
  - The weaknesses consist of limited land area and uncertain production quantity.
2. External factors (opportunities and threats):
  - Exploiting the opportunity of high vegetable demand;
  - Addressing the threats posed by price competition with competitors, pests, and diseases.
  - Alternative strategies that can be used to enhance marketing are: collaborating with potential hydroponic farmers who have good vegetable quality is crucial to meet the vegetable stock demand due to limited product variants and land constraints. This collaboration is necessary as the demand for vegetables remains high. It will also help enhance consumer trust in the availability of consistently provided vegetable types in the market (O2, O3, W5, W2).

Farmers are advised to increase the diversity of hydroponic vegetables and expand their hydroponic land. It is also expected that farmers will continue to promote their products both online and offline to expand their marketing network. Furthermore, it is hoped that they will continue to collaborate with potential farmers to ensure the availability of vegetables due to the consistently high demand. This will help build consumer trust in the availability of a variety of vegetables in the market. Additionally, it is important to educate the community about the importance of a healthy lifestyle by consuming hydroponic vegetables.

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