

Corn Farming Development Strategies in Improving Food Security in Sabulakoa Village, Sabulakoa Sub-District, South Konawe District

Angel Puspita Sari^{*1}, Ilma Saritamustaqiyma Rianse², Muhammad Aswar Limi³

^{1,2,3}Department of Agribusiness, Faculty of Agriculture, Universitas Halu Oleo
Kampus Hijau Bumi Tridharma, Anduonohu, Kec. Kambu, Kota Kendari,
Sulawesi Tenggara 93232, Indonesia

Corresponding Author: enjelpuspitasari1999@gmail.com

Abstract

Maize is one of the staple foods after rice/rice. In addition, corn is included in superior commodities so that it becomes the target of fulfilling food security. This study aims to identify farmers' development strategies in maintaining food security in Sabulakoa village, Sabulakoa sub-district, South Konawe district. The method used is descriptive method. The type of data used in this research is qualitative data. The population in this study were corn farmers totaling 20 people. Data analysis using SWOT Analysis with IFAS Matrix (Internal Factor Analysis Strategy) and EFAS Matrix (External Factors Analysis Strategy). The results showed that the strategy that can be used is the S-O strategy located in quadrant I by utilizing dry land area and experience in farming. So it is possible that the development of corn farming in Sabulakoa village has the strength to improve food security and take advantage of long-term opportunities. An aggressive development strategy can be started by maintaining good quality corn crops and providing abundant production so that it can meet demand and maintain food security in Sabulakoa Village.

Keyword: Development, Maize Farming Business, SWOT

INTRODUCTION

In Indonesia, maize is the second main food after rice. Maize is the most important secondary agricultural product to be cultivated and utilized in Indonesia, for food and feed. The

advantages of maize are utilized not only as an alternative staple food but also as a main source of renewable bioenergy production. (Wanto, 2019).

Apart from being eaten as a vegetable, corn can be processed into a variety of foods. Dry pellets are used as animal feed. These conditions provide promising prospects for maize cultivation both in terms of demand and selling price. The opportunity to increase maize commodities can fulfill food needs (Budi Santoso *et al.*, 2022).

Agricultural activities aim to increase productivity and achieve high profits. Production and productivity cannot be separated from the production factors available to farmers to increase the level of crop production. Low income is due to low labor productivity. Although farmers generally have a limited number of production factors, they have the desire to increase agricultural production. Therefore, farmers need to control their farms efficiently by utilizing the available factors of production. (Mardani *et al.*, 2017)..

Efficient farming can maintain food security, which is the most important pillar for human survival. Therefore, the availability of food reserves is one of the guarantees of human life. Therefore, obstacles to food supply and availability threaten the continuity of life. (Pamungkasi *et al.*, 2021)..

Farmers in Sabulakoa Village need rice to fulfill their food needs every day, but there is no land available to plant rice because the agricultural area is dry land suitable for planting corn. Therefore, the corn harvest is sold to buy other food needs such as rice. Food is a basic need for all humans and must be available in both quantity and quality, in the long term, healthy and safe. (Rahmawati *et al.*, 2020).

Based on the description above, it is very important to know about the development strategy of corn farming in maintaining food security in Sabulakoa Village, Sabulakoa Sub-district.

METHOD

The research was conducted in Sabulako Village, Sabulako Sub-district, South Konawe District from September to February 2024. Determination of the research location considers that Sabulakoa Village is the area where most farmers farm corn. The population in this study were all corn farmers in Sabulako Village, Sabulako Subdistrict, South Konawe Regency with a total of 195 corn farmers. The research sample used random sampling technique, taken 10% of the total population of corn farmers, namely 20 farmers. The type of data used is qualitative data, the data source uses primary and secondary data. Data collection techniques through observation, interviews and documentation. Research variables include internal factors or factors from within (strengths and weaknesses), external factors or factors from outside



(opportunities and threats) and farming strategies. The data analysis used is IFAS, EFAS, and SWOT.

RESULTS AND DISCUSSION

Maize Farming Potential

Internal Factors

Internal factors, namely strengths and weaknesses, based on direct field observations in accordance with the methods used, can be known what are the strengths and weaknesses of potential corn farming development strategies in Sabulakoa Village, Sabulakoa Sub-district, South Konawe District as follows:

1. Power

- a) Availability of Large Dry Land, the total land area in Sabulakoa Village for corn crops is 105 ha. Basically, the agricultural land used in Sabulakoa Village is mostly sweet potato and corn. However, under certain conditions, land used to grow sweet potatoes can also be used to grow corn. This condition can increase maize production as the land area used for maize cultivation increases. Therefore, the opportunity to develop maize cultivation in Sabulakoa Village is very promising and profitable.
- b) Experience in Maize Farming, the results stated that maize farmers in Sabulakoa Village have been cultivating maize for approximately 5 years to 15 years. The more experienced farmers are believed to be, the more comprehensive their thinking will be. Therefore, the lack of experience of farmers is one of the factors inhibiting the development of the agricultural sector.
- c) Good Corn Quality, in Sabulakoa Village, the quality of maize production is the most important factor for farmers to meet market demand. One of the ways farmers in Sabulakoa Village maintain the quality of their production is by using quality seeds such as bonanza f1, exotic f1, bisi2, and comender.

2. Weaknesses

- a) Lack of Cooperation between Existing Partners, the results of this study state that corn farmers in Sabulakoa Village still lack cooperation with partners. This is because farmers still sell their agricultural products directly to consumers. So it is less efficient and the little demand that farmers get which causes a lack of income.
- b) Limited Capital, the results of this study show that limited capital is the main cause in limiting the success of farmers. Many farmers in Sabulakoa Village prioritize their own funds to shop for the interests and needs of farming activities, ranging from





production inputs to post-harvest. Credit provides hope for farmers to fill the capital gap. This ensures that production needs are met and maximized, thus affecting the success of agricultural production.

- c) Farmers' Bargaining Position in Maize Pricing is Low, farmers who sell their produce to traders have higher bargaining power than those who sell to middlemen. This is because when farmers sell to middlemen, they do not have the opportunity to process their agricultural raw materials to increase their selling value, and the middlemen always charge prices much lower than the reference price or government market price. (Adi Paramitha & Sulomo, 2018).

External Factors

1. Opportunities

- a) Increase Farmer Income, the results of this study indicate that in the process of farming income is the main goal in farming. Income can be obtained because of the activities of selling agricultural products, providing services, using agricultural equipment that generate profits for farmers in Sabulakoa Village. The existence of these activities can increase farmers' income in addition to income from the harvest obtained.
- b) Development of Corn-based Processed Products, the results of this study show that another alternative to rice is corn. Corn is the second most important source of carbohydrates in the diet after rice. As the flagship product of Sabulakoa Village, increasing the added value of corn in processed products is also an urgent issue for small and medium enterprises. The existence of the processing industry transforms agricultural products into products that have high use value and economic value. One of the processed corn products in Sabulakoa Village is corn groats, dried jarung, lappo-lappo, morning, and others.
- c) High Market Demand, these results show that market demand can affect the amount of agricultural production in Sabulakoa Village. This is supported by the use of maize for industry and feed, which is very large compared to household demand for maize. Demand for maize tends to increase due to the increasing population and the growing number of industries that utilize maize as their main raw material. The high demand for maize can affect farmers' income.

2. Threat



- a) Erratic Weather Changes, the results of the study state that weather changes are one of the impacts of a decrease in farmers' yields on dry land in Sabulakoa Village. Shrinkage of crop yields results in shrinkage of farmers' income. The shrinkage of farmers' income is a short-term result, while in the long term it will affect the profession of farmers on dry land in Sabulakoa Village.
- b) Pests and Diseases, the results of this study show that pests and diseases are one of the problems for plant productivity. Environmental conditions that tend to be dry are the cause of increased pest and disease disturbances that cause more damage if they live in environmental conditions that are commensurate with their needs. Dry land conditions, as well as improper crop cultivation and the use of chemicals such as fertilizers and pesticides can affect corn plants and corn quality.
- c) Volatile Maize Prices, the volatile price of maize in Sabulakoa Village is an indication that shows the rise and fall or price changes caused by the influence of demand, changes in the price of agricultural products. Changes in the price of agricultural products caused by changes in weather, pests and diseases that make the quality of corn less good can affect the price of corn crops and the income of corn farmers. Erratic maize price changes are caused by seasonal fluctuations, which are a common occurrence in the agricultural economy. The rapid changes in maize prices can affect the income earned by farmers.

SWOT Analysis

Internal Factor Analysis Strategy (IFAS) Matrix

The Internal Factor Analysis Strategy (IFAS) matrix in this study is made based on an analysis of internal strategic factors which then each of these factors is given a weight and rating, so that the results (score) are obtained.

The following is a table of the average results of each internal strategic factor contained in table 1.

Table 1 Internal Factor Analysis Strategy Matrix (IFAS) on maize farming in Sabulakoa Village.

Internal Factors	Weight	Rating	Score (BxR)
Power			
1. Availability of large tracts of dry land	0,18	3	0,54
2. Experience in maize farming	0,18	4	0,72

3. Good corn quality	0,16	3	0,48
Total	0,52		1,74
Weaknesses			
1. Lack of cooperation with existing partners	0,16	2	0,31
2. Limited capital	0,16	1	0,16
3. Farmers' bargaining position in maize pricing is low	0,17	2	0,33
Total	0,48		0,80
TOTAL	1,00		2,54

Source: Research results processed, 2023

Based on the results of the IFAS matrix analysis, the total internal factor score of 2.54 is obtained from the strength score of 1.74 and the weakness score of 0.80. This proves that corn farming is in a strong position, with strengths being used well to solve weaknesses.

External Factor Analysis Strategy (EFAS) Matrix

The identification of external factors obtained from opportunities and threats is then analyzed with the EFAS (*External Factors Analysis Strategy*) matrix, each factor is given a weight and rating, so that the results (score) are obtained as in the table which is the average result of interviews with sorghum farmers so that opportunities and threats are known. The average results of each external strategy factor are in table 2:

Table 2 External Factor Analysis Strategy (EFAS) Matrix on corn farming in Sabulakoa Village

External Factors	Weight	Rating	Score Value
Opportunities			
1. Increase Farmer Income	0,17	4	0,70
2. Development of Corn-based Processed Products	0,17	3	0,52
3. High Market Demand	0,16	3	0,48
Total	0,51		1,70
Threat			
1. Erratic weather changes	0,17	1	0,17
2. Presence of Pests and Diseases	0,16	1	0,16

3. Erratic maize prices	0,16	2	0,33
Total	0,49		0,65
TOTAL	1,00		2,35

Source: Primary data processed, 2023

Based on Table 2, it can be seen that the results of the EFAS matrix analysis, the total score of external factors 2.35 obtained from the score of the opportunity factor 1.70 and the total score of threats 0.65. This states that corn farming is in a strong external situation, with opportunities having strengths so that they can be used properly so that they can overcome external threat factors.

SWOT Analysis (Strength Weakness Opportunities Threats)

SWOT analysis is a systematic identification of various factors in order to create a company strategy. This analysis is based on logic that makes it possible to maximize strengths and opportunities while minimizing weaknesses and threats (Astuti and Ratnawati, 2020).

The results of the analysis of internal factors and external factors in corn farming have a total score value of each, namely: strengths with a value (1.74), weaknesses with a value (0.80), opportunities with a value (1.70), threats with a value (0.65). So it is known that the difference between strength and weakness factors is ($1.74 - 0.80 = 0.94$), while the difference between opportunity and threat factors is ($1.70 - 0.65 = 1.05$), For more details, it can be seen in the figure below.

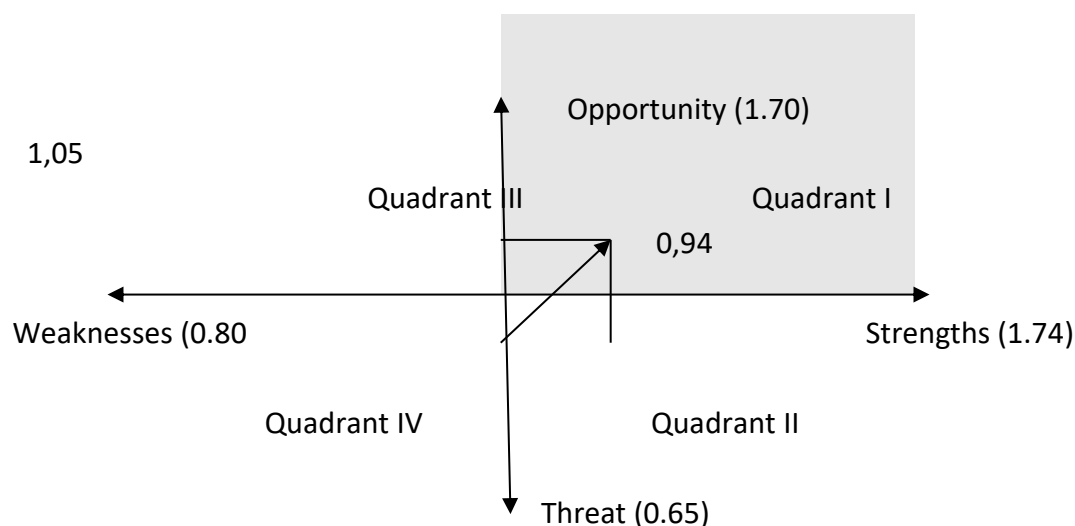


Figure 1. SWOT Analysis Diagram

Description:

Quadrant I = Support aggressive strategy

Quadrant II = Support diversification strategy

Quadrant III = Support turn around

Quadrant IV = Support divensive strategy

Figure 1 shows that the location of the shaded area is located in quadrant I. Explaining that the development of corn farming to improve food security in Sabulakoa village has great strength to be able to use the available opportunities. This situation shows an aggressive *growth* policy (*growth oriented strategy*). Until it does not rule out the development of corn farming in Sabulakoa village being able to develop its business by utilizing the long-term opportunities it has. An aggressive development strategy can be started by maintaining good quality corn crops and providing abundant production so that it can meet demand and maintain food security in Sabulakoa village.

SWOT Matrix (Strenght Weakness Opportunities Threats)

The SWOT matrix is a combination of internal factors (strengths and weaknesses) and external factors (opportunities and threats) that corn farmers are experiencing in seeing the potential of corn crops as food security in Sabulakoa Village. This matrix will clearly illustrate how to improve and utilize strength factors and opportunity factors to reduce and avoid weakness factors and threat factors. This matrix can be grouped into four types of strategies, namely S-O strategies, W-O strategies, S-T strategies, W-T strategies. The SWOT Matrix grouping can be seen in Table 3.

Table 3 SWOT Matrix Grouping

Internal Factors	Strength (S)	Weakness (W)
	1. Availability of large tracts of dry land 2. Experience in corn farming 3. Good Corn Quality	1. Lack of cooperation with existing partners 2. Limited capital 3. Farmers' bargaining position in maize pricing is low
External Factors		

Opportunity (O) 1. Increase farmers' income 2. Development of Corn-based Processed Products 3. High market demand	S-O Strategy 1. Utilizing large tracts of dry land to increase farmers' income. (S1,O1). 2. Utilize farmers' experience in improving maize quality (S2,S3,O1,O2).	W-O Strategy 1. Increase capital for farmers' income (W1,W3,O1,O3) 2. Open cooperation between existing partners to meet high market demand.(W1,O3)
Threat (T) 1. Erratic weather changes 2. Pests and Diseases 3. Volatile corn prices	S-T Strategy 1. Utilize farming strategies to increase maize prices. (S2,S3,T3).	W-T Strategy 1. Increase capital for problems that attack corn crops (W2,T1,T2)

In Table 3 about the SWOT matrix, we can know the strategy for developing corn farming to improve food security in Sabulakoa Village, Sabulakoa Sub-district, South Konawe Regency, as follows:

1. S-O Strategy

The S-O strategy is a strategy that utilizes the internal strengths of corn farming in Sabulakoa Village, Sabulakoa Sub-district, South Konawe Regency to take advantage of external opportunities. Alternative strategies used are:

- Utilize large tracts of dry land to increase farmers' income, the utilization of dry land in Sabulakoa Village is 105 hectares, most of the dry land is used for corn farming, only about 10 percent of which is used as land for growing pumpkins, sweet potatoes, and vegetables. The utilization of dry land for agriculture in Sabulakoa Village is still active in corn farming. Potential drylands are capable of producing sufficient and varied foodstuffs. Dryland is an agroecosystem with great potential for agriculture, both food crops and horticulture.
- Utilizing farmers' experience in improving the quality of processed maize products, the quality produced by maize farmers is very good, which can be seen from the experience of farmers who have entered approximately 20 years in farming,

increasing both the production and the quality of the products produced. The maize crop produced by farmers in Sabulakoa Village is of good quality. To obtain good quality maize, maize farmers make important steps such as fulfilling all production needs independently starting from seeds and carrying out the production process (cultivation) properly.

2. W-O Strategy

The W-O strategy is a strategy that aims to fix the internal weaknesses of corn farming in Sabulakoa Village, Sabulakoa Sub-district, South Konawe District by taking advantage of external opportunities. Alternative strategies were generated:

- a) Open cooperation with existing partners for farmers' income, partnership is one of the strategies in business through cooperation between two or more business actors that aim to gain mutual benefits. Partner cooperation can help farmers in the production process. In addition, cooperation with partners can help minimize the obstacles of limited resources in MSMEs, cooperation with partners can make mutual needs, strengthen, benefit each other and help optimize farmers' income.
- b) Increase cooperation between partners to meet high market demand, cooperation between partners is a business cooperation strategy that can be carried out by two or more parties for a certain period of time to gain profits. The existence of cooperation with existing partners can provide benefits to farmers to increase the production of agricultural products in order to be able to meet high market demand.

3. S-T strategy

The S-T strategy is a strategy that uses the internal strengths of corn farming in Sabulakoa Village, Sabulakoa Sub-district, South Konawe Regency to avoid and minimize the impact of external threats. Alternative strategies used is:

- a) Utilize farming strategies to maintain maize prices, factors in farming affect the quantity and quality of products. Farmers who have been involved in agriculture for many years will be more selective and accurate in choosing the types of innovations they introduce and will be more aware when making decisions. because it can lead to a decrease in product quality. Maize quality must be maintained so that the selling price does not decline. Declining selling prices can affect farmers' income in Sabulakoa Village.

4. W-T Strategy

The W-T strategy is a strategy that uses the internal weaknesses of corn farming in



Sabulakoa Village, Sabulakoa Sub-district, South Konawe Regency and avoids external threats.

Alternative strategies used are:

- a) Increase capital stock for problems affecting maize crops, agriculture is a high-impact business model because it relies on natural conditions. Natural conditions will always occur to farmers such as uncertain weather changes, pest and disease attacks that can cause the quantity and quality of agricultural products to decrease, especially triggering crop failure. Therefore, capital is needed to prevent problems that occur.

CONCLUSION

Based on the results of the study, it is concluded that the strategy for developing corn farming in increasing food security in Sabulakoa Village, Sabulakoa Subdistrict, South Konawe Regency is by utilizing dry land area, farmers' experience in farming can help maintain the quality of corn crops so that they can meet market demand and increase food security in Sabulakoa Village, Sabulakoa Subdistrict, South Konawe Regency.

Suggestions submitted by the author from the results of research on the development of corn farming in improving food security in Sabulakoa Village, namely Corn farmers are expected to be able to take advantage of factors that become strengths and opportunities in farming by maintaining the quality of corn plants so as to get good results to meet market demand and maintain food security and for the Government of South Konawe Regency, it is advisable to facilitate both farming capital assistance, provision of fertilizers and provision of tools for the development of corn farming.

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