

## ANALYSIS OF CASSIAVERA FARMING DEVELOPMENT STRATEGY IN KERINCI REGENCY

### *Analisa Strategi Pengembangan Budidaya Kasiavera di Kabupaten Kerinci*

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#### ABSTRACT

The purpose of this study are describes general picture of Cassiavera farming in Kerinci Regency, and Identifying any strategies and alternative strategies that can be applied in developing Cassiavera farming in Kerinci Regency. Research data is sourced from primary and secondary data. Data collection techniques are taken by means of observation, in-person interview, and indepth interviow. Determination of sample regions is done by the Stratified-Cluster random sampling method, where the technique combines stratafication and cluster methods. Meanwhile, the determination of farmer respondents was taken using the slovin technique. Data analysis in descriptive and SWOT analysis. The results showed that the development of Cassiavera farming in Kerinci Regency uses S-O strategy which is a combination of strength and opportunity factors, with alternative strategies that can be applied, namely maintaining the quality of Cassiavera to maintain the superior advantage of Cassiavera as Indonesia's superior export commodity to meet high market demand.

**Keywords:** *development strategy, SWOT analysis, cassiavera farm*

#### ABSTRAK

Tujuan penelitian ini adalah mendeskripsikan gambaran umum usahatani Cassiavera di Kabupaten Kerinci, dan mengidentifikasi strategi dan alternatif strategi yang dapat diterapkan dalam mengembangkan usaha tani Cassiavera di Kabupaten Kerinci. Data penelitian bersumber dari data primer dan data sekunder. Teknik pengumpulan data dilakukan dengan cara observasi, wawancara langsung, dan

wawancara mendalam. Penentuan daerah sampel dilakukan dengan metode Stratified-Cluster random sampling, dimana teknik ini menggabungkan metode stratifikasi dan cluster. Sedangkan penentuan responden petani dilakukan dengan teknik slovin. Analisis data secara deskriptif dan analisis SWOT. Hasil penelitian menunjukkan bahwa pengembangan usahatani Cassiavera di Kabupaten Kerinci menggunakan strategi SO yang merupakan kombinasi antara faktor kekuatan dan faktor peluang, dengan alternatif strategi yang dapat diterapkan yaitu mempertahankan kualitas Cassiavera untuk mempertahankan keunggulan Cassiavera sebagai unggulan Indonesia. komoditas ekspor untuk memenuhi permintaan pasar yang tinggi.

**Kata kunci:** strategi pengembangan, analisis SWOT, cassiavera farm

## INTRODUCTION

Plantation subsector is one of the agricultural subsectors that have superior power. Plantation subsectors directly and indirectly contribute to the economy of a country. The strategic role of plantations in the economy of Jambi Province is foreign exchange generation, labor absorption, contribution to GDP, drivers and attractors of other industries. The leading commodities that are the flagship in Jambi Province include palm oil, rubber, deep coconut, *Cassiavera* and coffee.

Indonesia is the world's leading producer and exporter of Cassiavera (*Cinnamomum burmannii* Blume), accounting for 40% of the total global spices market. For hundreds of years now, the country has been part of cinnamon's history, an evergreen tree that grows well depending on several factors, including altitude, rainfall, soil condition, topography, and groundwater availability. Various parts of the cinnamon tree can be used, including the root, trunk, leaves, and bark. However, the most valued part is the bark, the outer layer that covers the trunk. The bark is traditionally peeled, sundried, and differentiated into grades based on tree age. Cinnamon is commonly used as a flavoring additive and an aromatic condiment in the food and beverage industry, mainly to add flavor to drinks and cuisine. Cinnamon has a characteristic scent and is widespread as a drink and exotic food mixture among buyers and consumers (Muhammad, 2017), (Wijaksono, 2018) and (Harfika et al., 2019).

*Cassiavera* is considered as a high-value plant because every part of the plant, besides functioning as a spice, can also be used for pharmaceutical and perfume (Willis et al., 2019). Cinnamon wood can be used as raw materials for particle board, while the leaves and branches can be distilled to obtain oil. Over the centuries, the species have been domesticated so that now at least six different ones are grown in Southeast Asia.

*Cassia vera* from the Kerinci regency in Sumatera is the most renowned cinnamon brand in the global spice market. The Koerintji cinnamon, known as a premium *Cassia vera* commodity in the spice market, is the high volatile oil in its bark. Commonly, international buyers seek this specific oil to blend it with other spices and herbs for derivatives goods (Zoet, 2017), (Sabah et al., 2020), (Sivaranjani et al., 2021), (Rajkumaar et al., 2020). In the past few years, Koerintji *Cassia vera* has recently been used to manufacture various products, including chocolate and cocoa drinks, to improve their taste (Anggraini, 2015), (Hastuti, 2014). As the popularity grew, there was a noticeable impact on the value chain process.

The market demands a premium commodity of *Cassia vera* from this center of *Cassia vera* production in Indonesia. Here, cinnamon smallholder farmers play an essential role in the *Cassia vera* value chain, with most of the production coming from forestland of less than one to two hectares (Thibbotuwawa et al., 2017).

*Cassia vera* bark can be harvested from a cinnamon tree beginning around the tree's fifth year. To harvest cinnamon bark, harvesters cut down the *Cassia vera* tree and peel-off the outer bark to reach that good layer of inner bark. This inner bark is then peeled off and dried, which causes it to curl up (coil) into *Cassia vera* sticks. The *Cassia vera* trees have two leading roles as a safety net for its survival. First, the bark from the trees plays a vital role as a trading commodity in the economy of farmer households. Second, the trees can maintain and provide a positive influence on the physical environment, especially for protection of wildlife and the erosion of the landscape.

*Cassia vera* (Cinnamon) is one of the plantation commodities that are trending at this time. *Cassia vera* crop production in Jambi Province in 2019 amounted to 56,825 tons with a land area of 45,755 ha (Disbun Provinsi Jambi, 2019). Kerinci Regency is one of the largest cinnamon producing districts in Indonesia, in 2019 the land area is 40,632 ha with a production of 53,952 tons (Disbunnak Kabupaten Kerinci, 2019). *Cassia vera* produced in Kerinci Regency has the best quality in Indonesia (Habib, 2020), (Alimah, 2015) (Dirjenbun, 2008). *Cassia vera* plant has climate quality and is very suitable to be cultivated in Kerinci Regency which is humid with high rainfall, making it one of the superior commodities for farmers in the area (Kementerian Perindustrian RI, 2008).

The development of *Cassia vera* farming in Kerinci Regency is said to still not be optimally done and there are several problems that cause production to still fluctuate including the area of planting area that has decreased, the use of technology is still simple and the lack of support and policies from the government. The great opportunity nationally and globally commodity *Cassia vera* is very large, so a concept of *Cassia vera* agricultural development strategy is needed in Kerinci Regency. Based on the problems outlined, this

study aims to describe the general picture of *Cassia vera* farming in Kerinci Regency and identify what strategies and alternative strategies can be applied in developing *Cassia vera* farming in Kerinci Regency.

## RESEARCH METHOD

### Research Location

The research was conducted in Kerinci Regency of Jambi Province. The sample research area chosen deliberately (purposive) is Gunung Tujuh Subdistrict, Batang Merangin Subdistrict and Kayu Aro Subdistrict, with the consideration of location selection based on *Cassia vera* production which is the largest amount of production compared to other sub-districts. The study was conducted from May to October 2021.

### Population and Sample

The population in this study is farmers who do *Cassia vera* farming in Kerinci Regency. The determination of farmer respondents was taken using the slovin technique. The number of *Cassia vera* farmers population in the three selected sub-districts is 5,702 Family Card, with the percentage of leeway used is 15% of the population and the results of calculations can be rounded to achieve conformity. The number of samples is representative so that it can represent the diversity of the population and amounted to 45 respondents.

### Data Sources and Data Collection Techniques

The data used in the study is sourced from primary and secondary data. Primary data is taken by observation, in-person interview, and indepth interview. Secondary data is obtained from related agencies, journals, and previous research results.

### Data Analysis Methods

Research data is sourced from primary and secondary data taken by observation, in-person interview, and indepth interview. The data analysis used in this study is descriptive analysis and quantitative analysis. Descriptive analysis is used to describe the conditions and situations of *Cassia vera* farming in the research area. Analysis of internal and external factors using the IFAS and EFAS matrices, followed by the formulation of strategies with swot matrix.

## RESULT AND DISCUSSION

### Overview of Research Area

Kerinci Regency is one of the areas at the far west end of Jambi Province which is directly adjacent to the Province of West Sumatra and Bengkulu Province. Geographically, Kerinci Regency is located between 1°40'-2°26' south latitude and 101°08'-101°50' east longitude. Most of the areas (42%) at Kerinci regency is located at an altitude of 500-1,000 meters above sea level with an area of 159,583 hectares, the area which in altitude above 2,000 masl with an area of 14,267 hectares (4%), and the area which is between 0 - 500 masl have width 5.010 hectares (1%). The width area of Kerinci Regency is 332.814 hectares or 3,328.14 km<sup>2</sup>, where is more than half of the width area i.e 1990,89 km<sup>2</sup> is TNKS area and 1337.15 km<sup>2</sup> as well as for the area cultivation area of 1,337.16 km<sup>2</sup> and the rest is for residential areas (Badan Pusat Statistik Republik Indonesia, 2019).

### Characteristics Of Respondent Farmers

#### *Age of Respondent*

Age is one of the important factors influencing which in farmer behavior on decision making in managing and regulating activities on the business he is working on. The age of the respondents at the research area have varies ranged from 25 years old to 75 years old with the average age of the respondent farmers 56 years old. The population of productive age is in the age range of 15 up to 64 years old (BAPPENAS, 2017). There are 65% of Cassiavera farmers into in classified as farmers in productive age ranged from 25-64 years old. the productive condition of age farmer are expected to be able to manage their farming being optimally for support in the development of *Cassiavera* farming.

#### *Level Of Education*

The education level is one of the factors that influence the ability of a person's way of thinking, those who have relatively high education faster in implementing innovation adoption and vice versa (Soekartawi, 2011). The level education of respondent in between elementary school to bachelor degree. Most of the farmers at the research area are still relatively low, namely in elementary school education. According to (Hernanto, 2018), the length of the education level will be limited affect the way of thinking of accepting or rejecting new things.

### *Experience of Farming*

The experience of farming can affect the ability of farmer to manage and make decisions and risks in farming (Suratiah, 2009). Farmers have Cassiavera farming experience between 8 to 42 years, with an average of 23 years.

### *Number Of Family Dependents*

The number of family dependents is the number of family members who are still be the dependents of the family. Dependents of family are one of a human resource that has the potential as a participating workforce in helping farmers as the head of the household in managing the farm without the need to use external workers. Most of the farmers Cassiavera (59%) at the research area has a number of dependent family as much as 3 people.

### *Selling Price of Ouput*

The results of Cassiavera production at the research area are generally marketed through collectors with an average price per kilogram of Rp. 33,264, where the form of selling the results is in the form of dried Cassiavera. As for what is accepted farmers per kilogram is around Rp. 25.000, - up to Rp. 40,000,-. Most of the farmers (35%) receive prices between Rp. 25,000 - Rp. 27,000 (Menggala et al., 2021).

### **SWOT Analysis**

SWOT analysis is a tool for systematically identifying various factors to formulate a strategy. SWOT analysis is a planning technique that useful strategies for evaluating Strengths and Weaknesses, Opportunities and Threats in a business (Rangkuti, 2015). In developing a business, it is necessary to pay attention to where strengths which is owned, weaknesses whis is faced, opportunities should be achieved and the threats that may affect the future of the farm (Karmini, 2018).

Presented of the data in the SWOT analysis are obtained from the results of respondents interview based on successful internal and external factor that identified, then determine the weight of each factor. The amount of weight is determined by the level of importance of each in each determining factor variables in the strategic environment that obtained affect development of Cassiavera farming in Kerinci Regency (Iskandar et al., 2012), (Permadi et al., 2021).

## Identification of Internal and External Factors

Based on the results of interviews, can be identified of the internal environmental factors and external factors that are considered to influence the development of farming Cassiavera in Kerinci Regency. The results of the identification of strategic environmental factors consist of: of strengths, weaknesses, opportunities and threats, can be explained in table 1.

Table 1. Identification results of the Internal Factors and External Development Factors of Cassiavera Farming in Kerinci District

Internal Factors	External External
Strenght	Opportunity
a. Stable Price (Tends to Rise)	a. High Selling Power
b. Boosting the Economy	b. Future Investments
c. Suitability of climatic conditions, land and geography	c. Export Raw Materials
d. Potential Commodities	d. Processed Product Development
e. High Economic Value	e. Domestic and Foreign Market Demand
f. Multiplier Impact	
Weakness	Threat
a. Government Policy Is Less Supportive	a. Transfer of Land functions to Other Commodities
b. Cultivation Techniques Are Not Good Yet	b. Safety of Crops
c. <i>Cassiavera's</i> quality is low	c. Land Availability
d. The product form is still traditional	d. Competitors
e. Downstream Industries Are Still Minimal	e. Dependence on foreign markets
f. Minimal access to production roads	f. <i>Cassiavera</i> Developments Other Countries

## Internal Factor Analysis Summary (IFAS)

Based on the results of interviews that obtained each internal environmental factor consists of strengths and weaknesses that are considered to affect development of Cassiavera farming in Kerinci Regency. The results of internal factor analysis shows that the strength factor has a score of 1.90 and weakness has a score of 1.09. The value means that strength is greater than weakness, where Strength strategy can be said to be the most important compared to the factors weakness strategy. The calculation of internal factor analysis (strengths and weaknesses), more clearly contained in Table 2.

### External Factor Analysis Summary (EFAS)

Based on the results of interviews that obtained each external environmental factor consists of opportunities and threats which are presented in Table 3. The results analysis of external factors shows that the opportunities factor has a score of 2.13 and weakness has a score of 0.84. It can be said that in the development of *Cassia vera* farming in Kerinci Regency still has a greater opportunity than existing threats.

Table 2. IFAS Matrix of *Cassia vera* Farming Development in Kerinci Regency

No	Strategic Factors	Weight	Rating	Score
Strengths				
1	Stable Price (Tends to Rise)	0.10	4.0	0.41
2	Boosting the Economy	0.07	3.0	0.21
3	Suitability of climatic conditions, land and geography	0.10	5.0	0.52
4	potential commodities	0.07	4.0	0.28
5	High Economic Value	0.07	3.0	0.21
6	Multiplier Impact	0.07	4.0	0.28
SUM		0.48		1.90
Weaknesses				
1	Government Policy Is Less Supportive	0.07	2.0	0.14
2	Cultivation Techniques Are Not Good Yet	0.07	2.0	0.14
3	<i>Cassia vera</i> 's quality is low	0.10	2.5	0.26
4	The product form is still traditional	0.10	2.0	0.21
5	Downstream Industries Are Still Minimal	0.10	2.0	0.21
6	Minimal access to production roads	0.07	2.0	0.14
SUM		0.52		1.09
SUM S+W				2.98



Table 3. EFAS Matrix of *Cassia vera* Farming Development in Kerinci Regency

No	Strategic Factors	Weight	Rating	Score
Opportunities				
1	High Selling Power	0.10	4.0	0.39
2	Future Investments	0.10	4.0	0.39
3	Export Raw Materials	0.10	5.0	0.48
4	Processed Product Development	0.10	4.0	0.39
5	Domestic and Foreign Market Demand	0.10	5.0	0.48
SUM		0.48		2.13
Threats				
1	Transfer of Land functions to Other Commodities	0.10	1.5	0.15
2	Safety of Crops	0.06	2.0	0.13
3	Land Availability	0.06	2.0	0.13
4	Competitors	0.10	1.5	0.15
5	Dependence on foreign markets	0.10	1.5	0.15
6	<i>Cassia vera</i> Developments Other Countries	0.10	1.5	0.15
SUM		0.52		0.84
SUM O+T				2.97

The next stage is to determine the position of *Cassia vera* farming development in the research area, taking into account the weighted value of each factor, as follows :

Strength Weighted Values (S)	1.90
Weakness Weighted Values (W)	1.09
<b>Difference (S-W)</b>	<b>0.81</b>
Opportunity Weighted Values (O)	2.13
Threat Weighted Values (T)	0.84
<b>Difference (O-T)</b>	<b>1.29</b>

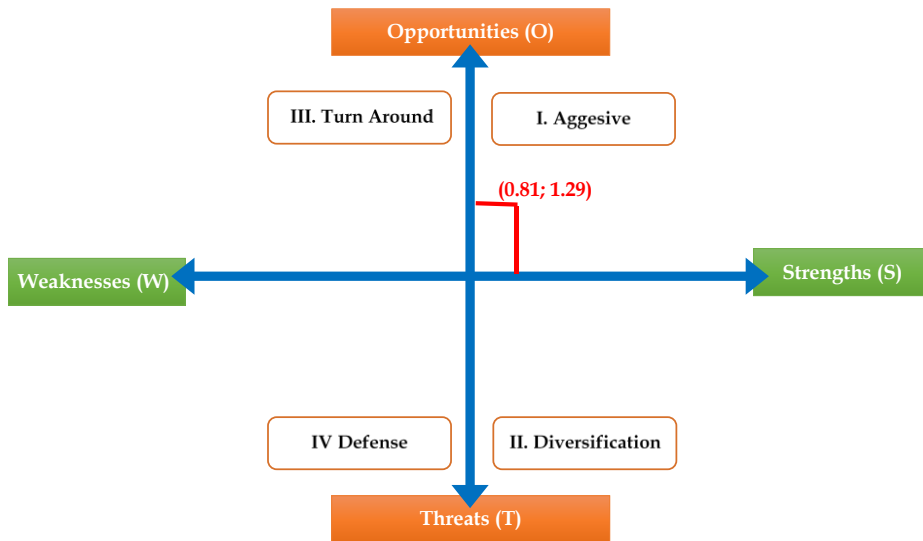


Figure 1.  
SWOT Diagram of *Cassiavera* Farming Development Strategy in Kerinci Regency

The position of *Cassiavera* farming in Kerinci Regency based on the diagram SWOT analysis in picture 1, obtained the highest calculation score lies in quadrant 1 is a combination of strength (S) and opportunity (O) strategic factors. Quadrant 1 is a benefit situation, means that *Cassiavera* farming has strengths that can take advantage of existing opportunities as well as possible. The position quadrant 1 supports an aggressive growth policy (growth oriented strategy) or an aggressive strategy (Rangkuti, 2015), (Adela, 2019).

**Alternative Strategy for *Cassiavera* Farming Development**

Alternative strategies for developing *Cassiavera* farming are obtained from a combination between of internal and external factors. The S-O strategy (Strength Opportunities) meant how to create a strategy that use strengths to take advantage of opportunities (Hasanudin, 2016), (Rosmeli, 2019), (Karami and Agahi, 2018), . The S-O strategy is very important to strengthen the position of farming in Kerinci Regency. Meanwhile alternative strategies that can be applied in the development of *Cassiavera* farming is to maintain the quality of *Cassiavera* to maintain excellence *Cassiavera* as Indonesia's leading export commodity to meet the high market demand (Hidayani, 2012), (Jaya et al., 2009).

The results of this "research" can support the statement of Nurhayani and Rosmeli (2019), (S R Menggala and Damme, 2018) (Ferry, 2013), (Rahmi, 2018), (Mufidah, 2014) on price shocks and the Kerinci Regency's cinnamon export market share which the results that maintaining the quality is the right main strategy for plant development *Cassiavera* because the price will be remain high and the market demand increase (Sinabuntar, 2016), (Mubarokah, 2020), (Putri et al., 2020).

## CONCLUSIONS AND SUGGESTIONS

Based on the research on farming development strategies in Kerinci Regency, it can be concluded that alternative strategies used is the S-O strategy (Strengths–Opportunities) by utilizing the power possessed to seize the opportunities that exist as best as possible, are maintain the quality of *Cassiavera* to become excellence of *Cassiavera* as Indonesia's leading export commodity to meet the high market demand. Based on the results obtained, the farmers should be more creative and improve cultivation techniques from planting, maintaining, harvesting to post-harvest. The Kerinci Regency Government is also expected to focus on development of *Cassiavera* plantation crops considering that it has vert good prospects, through support the policies by programs and helping for area expansion, productivity improvement, and quality improvement.

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