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Crystal Guava-Based Agribusiness Development Strategy in Pelaga Village, Petang District

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Abstract
Crystal guava is an attractive crop for cultivation in Indonesia. The limited expansion of the consumer market for fresh guava fruit is influenced by the quality of the fruit and the low shelf life of the fruit. Improvement of guava fruit quality is carried out to produce fruits that have a uniform shape, good size, and attractive fruit skin color. This study aims to analyze the effectiveness of the application of good and correct cultivation in increasing the productivity of crystal guava in Pelaga Village. The research method used is a case study with qualitative and quantitative approaches. Data were obtained through observation, interviews, and documentation. The results of the analysis show that the application of good and proper cultivation has a positive effect on increasing the productivity of crystal guava. In addition, the five highest factors in internal and external factors that affect crystal guava productivity were identified. IFE and EFE analysis on the IE Matrix showed that Pelaga Village has a strong position and opportunity, so seven strategies were developed to effectively increase the productivity and marketing of crystal guava. In conclusion, the application of good and correct cultivation is very important in increasing the productivity of crystal guava, and the strategies developed can be a guide for business development in the sector.

Keyword: *agribusiness, crystal guava, strategy, SWOT*

1. Introduction

Indonesia is one of the countries with abundant agricultural and plantation products so its people make a living as farmers. Agriculture is one of the main areas of human life, agriculture plays an important role in absorbing labor and providing income for most families in Indonesia, especially for people living in rural areas [1]. The agricultural sector must take part in the economic growth and welfare of farmers [2]. One of the areas in Bali whose agricultural sector is still maintained to this day is Pelaga Village. Pelaga Village administratively includes the Petang District area, Badung Regency. Pelaga Village is located at an altitude ranging from 650-1,110 meters above sea level. Pelaga Village has an area of 3545.20 ha [3]. Pelaga Village is a highland area with mountainous or hilly land conditions located about 40 km from Denpasar which has a normal climate, the average rainfall is 2135 mm^3 per year with an average temperature of 24.2°C. The average humidity is 92.5% and the average pressure is 1009.6 mm bar with 65% irradiation. The rain falls from October to April and the most rain falls from December to January. Pelaga Village has a variety of agricultural products in the form of vegetables and fruits, one of which is crystal guava.

Crystal guava is an interesting plant to cultivate in Indonesia because it has not been able to compete with international trade and tends to be consumed domestically [4]. Crystal guava has

been developed in Taiwan since 1991 and belongs to the guava family, while in Indonesia itself crystal guava has only been developed in 2009 [5]. Crystal guava is famous for its very low seed content, which is only 3% (Izzul et al. 2020). This happens because the seeds crystallize so that only a few seeds are left [6]. The crispy texture of the fruit has the potential of crystal guava to replace the availability of imported fruits, especially pears and apples with similar textures, which are very promising [7].

The limited expansion of the consumer market for fresh guava fruit is influenced by the quality of the fruit and the low shelf life of the fruit [8]. Improving the quality of crystal guava fruit is carried out to produce fruits that have a uniform shape, good size, and attractive skin color [9]. Some of the health benefits of crystal guava include vitamin C, vitamin A, potassium, and antioxidants. Although in small amounts, guava also contains other nutrients such as fiber, iron, protein, magnesium, and folate. In addition, guava also contains beneficial antioxidants found in its fruits and leaves [10]. Agribusiness is an effort in the agricultural production process that includes the utilization of agricultural production facilities, the cultivation of agricultural products, and the management of agricultural products. Agribusiness in the field of economics and as an academic course reviews strategies to gain profits by managing from the aspects of cultivation, provision of raw materials, post-harvest, and processing to the marketing stage [11].

Fruit quality problems that are often faced by farmers in the cultivation of crystal guava plants are pests and diseases, improper post-harvest handling, and diverse fruit appearances [12]. The highest risk of decreased crystal guava production is related to erratic (extreme) weather conditions, pest and disease attacks, lack of harvest and post-harvest handling facilities, lack of irrigation facilities, lack of safety systems, errors in the fruit packaging process, errors in the pruning process and no documented SOPs. The main obstacle to increasing agricultural productivity is pests and diseases, which can interfere with plant physiology and growth [13]. The diagnosis of diseases in plants is usually carried out by a plant researcher based on the symptoms that arise and are observed by the researcher. The good quality of crystal guava can be seen from its nutritional value, taste test, and fruit texture. The appearance of the fruit is an attraction for consumers in choosing crystal guava fruit. Therefore, the appearance of the fruit, especially the smoothness of the fruit, is often an obstacle in the marketing of fruit, both from farmers from the garden and at the distributor level in the market [14]. Appearance can be evaluated based on fruit size, shape, color, luster as well as external/internal defects and damage. Improving the quality of crystal guava fruit is carried out to produce fruits that have a uniform shape, good size, and attractive skin color [9]. The quality of fruit needs to be improved to increase product value and meet consumer desires. The growth, yield, and quality of crystal guava fruit for commercial production can be easily controlled by horticultural practices such as pruning and limiting the number of fruits per plant for a good harvest depending on the situation [8].

Consumer demand for the quality of crystal guava fruit continues to increase in line with public awareness of healthy living [15]. A problem that often occurs in the marketing aspect. Partners use word-of-mouth marketing techniques and leave products at shops or stalls around the plantation. However, many times the crystal guava harvest cannot be sold quickly so the fruits become rotten and eventually have to be thrown away [16]. Business strategies need to be formulated for the development of a business. One of the methods that can be used to formulate a business strategy is to use a SWOT analysis. The use of SWOT analysis is carried out through the systematic identification of various factors to formulate the company's strategy [17]. SWOT analysis is based on logic so that it can maximize strengths and opportunities, which can also minimize weaknesses and threats at the same time.

2. Materials and Methods

2.1. Time and Place of Research

This research will be carried out in December 2023 on the Crystal Guava business with an extensive maintenance system (cultivation) in Pelaga Village, Petang District, Badung Regency, Bali Province.

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2.2. Methodology

The location selection was carried out deliberately (purposive) with the consideration that the plantation was experiencing problems with suboptimal production capacity, limited capital, information and knowledge for business development, and simple production equipment. Pelaga Village has regional potential that allows for the development of the Crystal Guava industry, as well as other considerations such as: 1) Pelaga Village is one of the villages that is currently producing crystal guava, 2) Farmers in Pelaga Village, Petang District, Badung Regency produce crystal guava consistently every year, and 3) Similar research has never been conducted at the research location.

2.3. Data Analysis Method

The analysis method in this study is SWOT (strengths, weaknesses, opportunities, and threats) with paired comparisons to determine the most influential factors. Processing and analysis Data collection in this study is carried out qualitatively and quantitatively. Qualitative data is presented in a descriptive form to describe the general picture and internal and external factors of Pelaga Village. Quantitative data is in the form of weighting for internal and external factors, weighting for the decision-making stage, and determining strategy priorities [18].

2.4. SWOT Analysis

The SWOT matrix is an analysis tool used to compile strategic factors of the Crystal Guava business in Pelaga Village, Petang District. The SWOT matrix describes how opportunities and threats can be combined with the strengths and weaknesses of the business. The formulation of this strategy produces four alternative strategies, namely the strategy of adjusting strengths and opportunities (S-O strategy), weaknesses and opportunities (W-O strategy), strengths and threats (S-T strategy), and weaknesses and threats adjustment strategy (W-T strategy).

The data from the matrix tabulation were then taken from five alternative strategies to plan the development of the Crystal Guava plantation business in Badung Regency by paying attention to several important aspects such as natural resources, human resources, and institutions. The SWOT matrix is an important matching tool to help managers develop and develop four types of strategies to be implemented.

2.5. Identification of Internal and External Factors

Factor identification is carried out by identifying possible influencing factors based on the relevant literature for each aspect and facts in the field. Identification is carried out by a listing and checking system for each factor that influences, namely the identification of the type of plantation (setup and type of fertilizer) with special factors in each sub-district in Badung Regency. The method used refers to [19] in identifying internal and external factors.

2.6. Evaluation of Internal and External Factors

The evaluation of internal and external factors is carried out to assess the magnitude of the influence of certain factors related to the purpose of the Crystal Guava industry. The evaluation of factors is carried out to assess the magnitude of the influence of certain factors related to the purpose of the product launch. The value produced from the evaluation of this factor describes the business condition internally and externally [19]. This evaluation activity is known as Internal Factor Evaluation (IFE) and External Factor Evaluation (EFE). Evaluation of internal and external factors was carried out in Petang District which is related to the running of the Crystal Guava business process. Evaluators are people who are directly (internal) and indirectly (external) involved in the Guava Kristal business process.

The identification of these factors can create the effectiveness of the strategies carried out by the business so far can be known and business development can be formulated by determining strategies that can take advantage of existing external and internal factors. The stages in filling the IFE matrix [19] are as follows:

a. List internal factors (strengths and weaknesses)

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b. Weighting ranges from 0-1 (non-essential-very important) for each factor. The weight given is the significance of the factor to the success of the goal (the total number of weights must be 1). Weight determination is carried out by paired comparison with scale; 1=the horizontal factor is less important than the vertical; 2=the horizontal factor is just as important as the vertical factor; 3=Horizontal factors are more important than vertical factors.
c. The weight of each variable is obtained by determining the value of each variable against the sum of the total values with equation 3 (Kinear and Taylor Equations) as follows:

$$\propto_i = \frac{x_i}{\sum_{i-1}^{n} x_i} \quad (3)$$

Information:
α = weight of the ith variable
X= value of the ith variable
i = 1,2,3,n
n = Amount of data

d. Rankings 1 to 4 are assigned to each factor (1=very weak, 2=weak, 3=strong, 4=very strong). Ratings on individual data are determined using frequency distribution. The data of each individual is then grouped into group data whose main rank is determined by mode.
e. The external factor evaluation step is the same as the stage in the internal factor evaluation, the difference is in the final stage of the total weight score of 4.0 which shows that the business strategy has a good response to opportunities and threats. A total weight score of 1.0 indicates that the company's strategy is not taking advantage of opportunities or avoiding threats.

2.7. Internal-External (IE) Matrix Analysis

This stage is a business positioning with a matrix called the IE matrix. The filling of this matrix is carried out with the plot of the results of internal and external evaluations [19]. The total weighted average of IFE is the X-axis and the total EFE score is the Y-axis. The cutting point of these two factors is the company's strategic position. The formulation of the strategy is carried out descriptively according to the results of factor identification, factor evaluation, and business positioning. The strategy is formulated based on the business position and the strategy necessary to achieve it. The Internal-External Matrix can be seen in Figure 5 [19]. The results of the identification of the company's strengths, weaknesses, opportunities, and threats are used to formulate alternative strategies using a SWOT matrix.

2.8. Farming Feasibility Analysis

A feasibility analysis was carried out to determine the extent of the feasibility of Crystal Guava farming in Plaga village, Petang District, Badung Regency. The results of the analysis have several eligibility criteria, including income costs and investment criteria. The eligibility criteria used in the analysis are NPV (net present value), IRR (internal Rate of Return), PP (payback period), and PI (profitability index).

3. Results and Discussion

The results of the IFE factor analysis of the Crystal Guava-Based Agribusiness Development Strategy in Pelaga Village, Petang District can be shown in Table 1.

In analyzing the internal environment, an IFE matrix was used to obtain factors The availability of good raw material sources has the highest score of 0.200. Availability Raw materials are an important part of the production process. Raw materials are unprocessed raw materials that will be processed into finished products as the main product [21]. Raw materials are raw materials that have not been processed and will be processed into finished goods as the main product [22]. The existence of high-quality raw materials and avoiding defects will also provide good product quality. Raw material quality is a material obtained from nature or suppliers

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that have been tested for quality so that it can be used as the main ingredient in the production process to produce quality and highly functional finished products [23].

Table 1. Highest Value of Crystal Guava IFE Factor

No	Power Factor	Weight	Rating	Score
1	Availability of Good Raw Material Sources	0.050	4	0.200
2	Has Strategic Partners in Increasing the Productivity of Crystal Guava in Pelaga Village (Research Institutes, Universities, Government, Banking)	0.050	4	0.200
3	Farmer Profession for Generations	0.050	4	0.190
4	Customer Cooperation in Increasing the Productivity of Crystal Guava Pelaga VillageQuite Good	0.050	3	0.160
5	Farmers and farmer groups have the spirit to move forward	0.050	3	0.160
No	**Weak Factors**			
1	There is no SOP for the production process	0.060	2	0.116
2	Pelaga Village Crystal Guava Cultivation System Has Not Been Effectively Implemented	0.050	2	0.100
3	Promotional and Execution Media in Companies Has Not Been Integrated	0.040	2	0.080
4	Crystal Guava Cultivation Management in Pelaga Village Conventional	0.040	2	0.077
5	Small economies of scale	0.030	2	0.058

Furthermore, the factor of having strategic partners in increasing the productivity of crystal guava in Pelaga village (research institutions, universities, governments, banks) has the highest score of 0.200, the role of strategic partners and the role of change agents and management jointly play a role in efforts to form, maintain and improve the performance of university and industry collaboration, providing benefits to both parties to invest in The development of research capabilities carried out by universities and industry focuses on the research areas of both parties and seeks the best solutions to problems faced by the industrial world through research collaboration to improve company performance and ultimately will have an impact on national economic growth. The thing that needs to be thought about is how to build a knowledge-based industry so that innovation can be achieved through cooperation between industry and universities. The university as higher education can provide an improvement in the knowledge-based economy through mutually beneficial cooperation with industry, and the impact is also expected to be felt by the community through small and medium-scale industries. The existence of cooperation between various parties is expected to grow and develop regional development. The role of local governments is to be present as a leader and driving force for the development of agro-tourism [24].

The third factor is the hereditary farming profession with a score of 0.190. The characteristics of farmers are one of the important things because they will be directly related to farming activities [25]. Knowledge to manage farmers' land optimally includes knowledge about the methods, benefits, and use of fertilizers, the benefits of treasuring, post-harvest management, the use of superior seeds, and marketing. With a low level of education, farmers usually lack mastery of all farming techniques needed to manage agricultural land optimally. However, several farming techniques are obtained from generation to generation from parents, such as making treasuring or rorak, managing crops simply with local techniques, and selling the results prospectively.

Table 2. Highest Value of Crystal Guava EFE Factor

No	Opportunity Factors	Weight	Rating	Score
1	Potential for Cooperation in the Field of Research and Service	0,015	3	0,045
2	Potential of Processed Products	0,01	4	0,040
3	Bali Province Area Segment	0,01	4	0,040
4	Potential for Integrative Cooperation Programs	0,01	4	0,040
5	Operational costs are increased in efficiency (employee salaries, and operational costs).	0,01	4	0,040

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No	Threat Factors			
1	Competitors who imitate similar products	0,01	2	0,021
2	Potential product unavailability and continuity	0,01	2	0,020
3	Selling prices and margins are threatened by competitors	0,009	2	0,018
4	Promotional Communication Media Threatens to Be Irrelevant to Current Customer Behavior	0,007	2	0,014
5	Open Market	0,005	2	0,010

Deep analysis of the external environment using the EFE matrix obtained the opportunity factor of the potential for cooperation in the field of research and service with a score of 0.045. The existence of crystal guava research and development institutions aims to create innovations in improving quality and production. This institution can also improve the quality of agricultural human resources and the crystal guava industry through socialization, training, and counselling [26]. Service in the form of education and training, consulting, apprenticeship, mentoring, and research in the field of entrepreneurship, initiating the growth of WUB among students and the community [27]. Community service activities in crystal guava agrotourism can be used as an alternative economic source and increase community income to create an economically independent community and this agrotourism can be used as one of the attractions for tourism [28].

The second factor is the potential for processed products with a value of 0.040. According to [29] One of the leading commodities in the plantation subsector is crystal guava. Crystal guava is a product that has market opportunities both domestically and abroad. Crystal guava processed products are also not limited to processed fruits, one of the other ways to increase the added value of crystal guava plants is to process the leaves into guava leaf crumbs [30], dodol products [31], candied fruit [32], and fruit syrup [26]. Based on the results of research and service that has been carried out previously, guava can be processed into jam, syrup, pie or nastar, and sticks [33].

The third factor is the Bali provincial area segment of 0.040, in the current era of globalization, knowing the market segment and determining the target market is the key and an important factor to achieve success [34]. In addition, marketing also needs to focus on consumers because the achievement of consumer needs and satisfaction will provide decent profits in the long run [22]. The background of the importance of market segmentation for companies is that segmentation allows companies to allocate resources. Second, segmentation is the basis for determining the components of market strategy. Segmentation accompanied by the selection of the target market will provide a reference and basis for determining positioning. Third, segmentation is a key factor in beating competitors, because consumers are too heterogeneous, so companies need to group the market into market segments, and then select and set certain market segments as targets.

		IFE		
		Strong (3 – 4)	Keep (2 – 2,99)	Weak (1– 1,99)
EFE	Height (3 - 4)	**I**	**II**	**III**
	Medium (2 – 2.99)	**IV**	**V**	**VI**
	Low (1 – 1.99)	**VII**	**VIII**	**IX**

Figure 1. IE Matrix

The discussion in this study can be conveyed based on the results of the research obtained, the Strategy for the Development of Crystal Guava-Based Agribusiness in Pelaga Village, Petang District can be shown through environmental analysis using the IFE matrix with the results obtained as the factor of availability of good raw material sources for good crystal guava cultivation supporters have the highest score with 0.200. The availability of raw material sources plays a very important role in increasing the productivity of crystal guava because this raw material is included in good and correct cultivation, inventory control is one of the most important for agroindustry because, without proper inventory control, the agroindustry will reduce

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production. Inventory control is one of the most important things for an agroindustry because without proper inventory control, the agro-industry will experience problems in meeting consumer needs in the form of products produced by the agro-industry.

Another factor that helped determine the increase in productivity was the hereditary farming profession with a score of 0.190. Knowledge to manage farmers' land optimally includes knowledge on how to cultivate crops properly and correctly, the benefits and use of fertilizers, the benefits of treasuring, planting shade crops and ground cover, pruning, post-harvest management, the use of superior seeds and marketing (part of good and correct plant cultivation). With a low level of education, farmers usually lack mastery of all farming techniques needed to manage agricultural land optimally. However, several farming techniques are obtained from generation to generation from parents, such as treasuring, managing crops simply with local techniques, and selling the results prospectively.

Various factors need to be analyzed, for that it starts by identifying internal and external factors. Factor analysis is carried out to obtain key success factors that can be used as determinants in making policies. To achieve the desired goals and objectives, it is greatly influenced by internal and external factors. Internal factors in the scope of the problem can be in the form of Strengths (*Strengths*) and Weaknesses (*weaknesses*), while external factors that affect the organization can be in the form of Opportunities (*Opportunities*) or Threats (*Threats*). Furthermore, from these internal and external factors, an assessment is carried out to determine the urgency value (NU) and the support value (ND) [13]. The relationship with the above can be seen as shown in Table 6.

The results of the EFE and IFE analyses were combined in the IE matrix (Figure 6) and the results were obtained that the key resource elements were in quadrant II. Quadrant II means that Crystal Guava Pelaga Village is a strong and promising product. According to [35]. The strategy used in quadrant II is the growth and fostering strategy *(build and growth)*, which includes; market penetration strategies, such as: improving product quality, improving good relations with distributors and suppliers, improving the company's organizational structure. Then market development strategies, such as: such as; Increasing the marketing of existing products to new markets, increasing product promotion, and optimizing product marketing through efficient promotional activities and incentives. Furthermore, product development strategies can be carried out by; controlling product quality, offering mutualism with suppliers and getting cheaper raw material prices, and observing food and beverage trends among the public. The last alternative strategy is the future integration strategy, such as; creating innovations for new products that are more in demand by consumers and analyzing MSME finances.

Despite facing various threats, this product still has strength in terms of internals. The strategy that must be applied is to use strength to take advantage of long-term opportunities in a strategic way by applying good and correct crystal guava cultivation. This is following the instruction where good and correct cultivation is the technical implementation of the certification system for agricultural production processes that use advanced environmentally friendly and sustainable technology, so that harvested products are safe for consumption, worker welfare is considered and farming provides economic benefits for farmers.

This is in line with the results of research conducted by [36], where the growth and development strategy involves intensive steps such as expanding planting areas for crystal guava farming, utilizing family members as labor, adopting modern agricultural tools, post-harvest processing efforts, and carrying out regular counseling. Good and correct cultivation guidelines are guidelines for how to manage plant cultivation, starting from pre-harvest activities to post-harvest handling to become a general guideline in carrying out food crop cultivation correctly and precisely, so that high productivity, good product quality, maximum profits, environmental friendliness and attention to safety aspects are obtained, the health and welfare of farmers, as well as sustainable production efforts. Another chart [22] reveals that the implementation of good and correct cultivation reflects three sustainable pillars, namely good agricultural practices must be economically feasible, environmentally friendly, and socially or socially acceptable including food safety and quality. Through the Regulation of the Minister of Agriculture of the Republic of

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Indonesia Number 49 of 2014 concerning Technical Guidelines for Crystal Guava Cultivation, where the scope of this guideline includes internal activities, namely: Sustainable Crystal Guava Production; Good Crystal Guava Cultivation; Business Diversification in Crystal Guava Cultivation; Harvest and Post-Harvest Handling.

An agro-industry that implements good and correct cultivation has opportunities and strengths so that it can take advantage of existing opportunities. The strategy that must be implemented in this condition is to support aggressive growth policies. The strategy recommendations given are progressive, which means that the company is in good condition so that it has a great opportunity to expand, increase growth, and achieve maximum progress.

The result of external and internal environmental factors that make up the internal and external matrix. Based on the five highest factors of the IFE and EFE factors, a SWOT matrix is prepared (Table 3), from which several alternative strategies are produced on key resource elements as follows: S-O (*Strengths-Opportunities*) strategy, namely collaborating in raw material research, *raw material supply chain*, and alternative raw material procurement, developing product diversification through strategic research results, conducting periodic performance assessments; The S-T (*Strengths-Threats*) strategy is to prepare alternative strategies for the supply chain of raw materials to distribution, design cooperation between farmer groups to secure market prices; The W-O (*Weaknesses-Opportunities*) strategy is the development of production SOPs through adjustments and approaches to local culture; The W-T (*Weaknesses-Threats*) strategy is to develop integrated promotion management.

Table 3. SWOT Matrix

IFE/EFE	**Power (S)**	**Weakness (W)**
	1. Availability of good raw material sources 2. Having strategic partners in increasing the productivity of crystal guava in Pelaga village (research institutions, universities, government, banks) 3. The profession of farmers from generation to generation 4. Customer cooperation in increasing the productivity of crystal guava in Pelaga village 5. pretty good 6. Farmers and farmer groups have the spirit to move forward	1. There is no SOP for the production process 2. The crystal guava cultivation system in Pelaga village has not been carried out effectively 3. Promotion and execution media in the company have not been integrated 4. The management of crystal guava cultivation in Pelaga village is conventional 5. Small economies of scale
Chance (O)	**S-O Strategy**	**W-O Strategy**
1. Potential for cooperation in the field of research and service 2. Potential of processed products 3. Bali Province area segment 4. Potential for integrative cooperation programs 5. Operational costs are increased in efficiency (employee salaries, and operational costs).	1. Collaborate in raw material research, *raw material supply chain*, and alternative raw material control. 2. The development of product diversification that has Petang's identity or characteristics through the results of strategic research. 3. Conduct periodic performance assessments.	1. Development of production SOPs through local cultural adjustments and approaches
Threat (T)	**S-T Strategy**	**T-O Strategy**

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1. Competitors imitating similar products 2. Potential product unavailability and continuity 3. Selling prices and margins are threatened by competitors 4. Promotional communication media is threatened with being irrelevant to current customer behavior 5. Open market	1. Preparing alternative strategies for the supply chain of raw materials to distribution. 2. Designing farmer group cooperation to secure market prices	1. Establish integrated promotion management

Based on the SWOT Matrix in Table 3. obtained under the first S-O Strategy is to work together in raw material research, *Supply Chain* raw materials, and alternative raw material packing. The existence of crystal guava research and development institutions aims to create innovations in improving quality and production. This institution can also improve the quality of agricultural human resources and the crystal guava industry through socialization, training, and counselling [37].

The second S-O strategy is the development of product diversification through the results of strategic research. Diversification strategy is an effort to find and develop new products or markets, or both, to pursue growth, and increase sales, profitability, and flexibility. The product development strategy aims to increase added value, increase the competitiveness of the products produced, reduce risks, utilize existing technology, stabilize revenue and take profits. Consumers can be captivated by the diversification of new products with a slight modification of the form, packaging design, product expansion, taste of a product, and the addition of new products. Diversification can be done by: acquiring and restructuring, transferring competencies, and creating *economies of scope*. The third S-O strategy is to conduct periodic performance assessments. A company periodically conducts performance appraisals for its employees. Employee appraisals are always carried out for several reasons from a practical point of view, most of the employee's payment and promotion decisions are taken through the employee's performance appraisal. Assessments will help with a useful career planning goal. The assessment provides an opportunity to review the employee's career plan within the scope of these strengths and weaknesses.

In the S-T Strategy, the first strategy is to prepare an alternative strategy for the supply chain of raw materials to distribution. Two important things are obtained when strengthening the availability chain strategy, the first is the collaboration of joint efforts between each part or process in the product cycle and the second is that SCM can cover all product cycle activities [38]. Moreover, *Supply Chain* Supply chain management is the planning, design, and control of the flow of information and materials along the supply chain to efficiently meet customer needs now and in the future. *Supply Chain Management* is the management of activities that procure materials and services, transforming them into semi-finished goods and final products and delivering products through the distribution system. The supply chain has an interconnected relationship between raw material suppliers and services that includes the transformation of raw materials into products and services and the process of delivering them to customers. Supply chain management strives to connect every activity within a company and its suppliers to match the flow of raw materials, services, and information according to customer demands. product diversification development through the results of strategic research, and conducting periodic performance assessments.

The second S-T strategy is to design cooperation between farmer groups to secure market prices. According to [39]. The partnership pattern of the government program is inclined to develop partnerships vertically with the relationship pattern of "Father of Adopted Children" which in plantation agribusiness is known as the PIR (People's Core Plantation) pattern. Meanwhile, the market partnership pattern develops as a result of the entry of the market economic system in the people's agricultural business in the countryside. The type of agricultural

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business targeted is a farming business that produces agricultural commodities with high economic value and has a strong demand in the world market. This pattern involves farmers with large capital owners engaged in the processing industry and marketing of produce. They promote cooperation (partnership) because of the importance of various economic benefits (*mutually beneficial*). Smallholder farming can coexist with large corporations by fostering interdependence in which farmers feel they own the company through stock ownership. Producer farmers must be shareholders so that collectively farmers control the agribusiness body and farmer organizations are not limited only to raw material production activities are some of the characteristics of partnerships.

The first W-O strategy is the development of production SOPs through adjustments and approaches to local culture. The adoption of innovations carried out by farmer group members resulted in an increase in production in member farming. say that an increase in production costs will be in line with an increase in the amount of production, but at a certain level, the addition of inputs will no longer increase output, it can even make output decrease. The adoption of new technology by members makes the costs incurred for farming even higher, but the increase in costs is accompanied by a significant increase in the amount of production. The second W-O strategy is to produce products that have Kintamani's identity or characteristics. Brand Identity is a stage in determining the brand of a product, by having characteristics of the product so that it can provide differentiation from other products, which can stick and attract in the minds of customers, which results in curiosity about the product offered and wanting to buy it [40]. The existence of Identity will make it easier to identify a brand among other brands. Customers will immediately know a product or service offered when they see the brand identity. With this, it will make it easier for customers to decide whether they will buy the product or not. The decision (*decision*) includes a choice between two or more alternative actions (or behaviors). A purchase decision is a decision to purchase or not to make a purchase, which decision is based on the results obtained from the activity or activity before the purchase. Thus buying is not just buying without awareness. Buying is the final decision after considering several options. A consumer's purchase decision is to buy the most preferred brand, but two factors can be between purchase intent and purchase decision. Both of these things lead to purchasing decisions. Decision (*decision*) includes a choice between two or more alternative actions (or behaviors). A purchase decision is a decision to purchase or not to make a purchase, which decision is based on the results obtained from the activity or activity before the purchase. Thus buying is not just buying without awareness. Buying is the final decision after considering several options [41]. The purchase decision (*purchase decision*) consumers are buying the most preferred brands, but two factors can be between purchase intent and purchase decision, both of which lead to a purchase decision.

The first T-O strategy is to develop integrated promotion management. The development of a marketing network needs to be supported by value communication or promotions that are tailored to the alternative marketing system to be determined. Alternative marketing systems offered include using an existing direct selling system, creating a new direct selling system specifically for new products, opening an outlet or boutique specifically selling the product, and selling online via the internet (creating a homepage or through social media networks). Based on the SWOT analysis, the calculation of the total IFAS and EFAS scores of the crystal guava position of Pelaga village lies in quadrant IV. The crystal guava of Pelaga village is located in quadrant IV because the difference between the two weighted values is positive and negative, namely 0.72 and -1.20. Visually, it can be seen in Figure 2 below.

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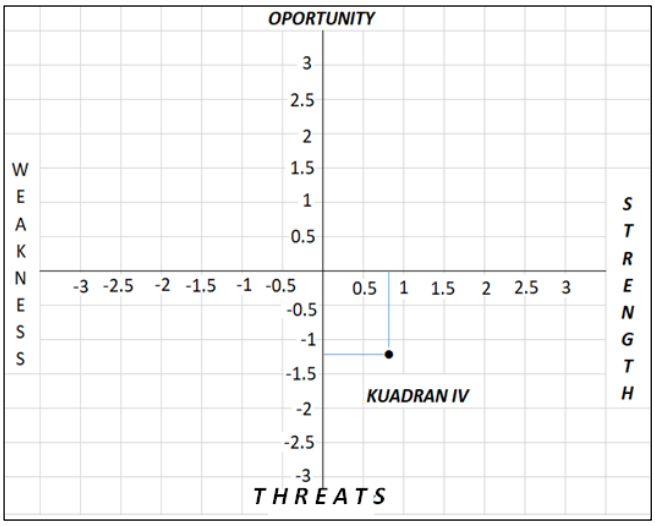

Figure 2. The Position of Crystal Guava in Pelaga Village in the SWOT Matrix

According to the SWOT matrix image above, the crystal guava of Pelaga village should use a diversification strategy. In quadrant IV (its position on the path of strength and threat) means that the crystal guava of Pelaga village has a strong competitive position, but is in an industry with slow growth.

This product has the power to launch diversified programs into more promising growth areas. Businesses or products that fall into the IV quadrant have high levels of cash flow and limited internal growth needs and can often pursue related or unrelated diversification. Companies/agro-industries in Quadrant IV can also carry out cooperative or partnership efforts [37]. According to [42][43] Companies in Quadrant IV have more threats than opportunities but have a lot of strength in internal resources. Strategies that are suitable for companies in quadrant IV are horizontal integration, concentric diversification, and *Joint Venture*. According to [44][45] Quadrant IV has a Diversification Strategy. Strategy Diversification is a favorable situation, by creating advantages and avoiding weaknesses.

In addition to the SWOT analysis, there is also an analysis of the feasibility of farming. In this farming business, the results are obtained in Table 4.

Table 4. Eligibility Criteria for Crystal Guava Farming

Eligibility criteria	Value
Net Present Value (NPV)	28.50 %
Internal Rate Of Return (IRR)	10.80 %
Payback Period (PP)	1 year 2 months 2 days
Profitability Index (PI)	6.54

A feasibility analysis was carried out to determine the extent of the feasibility of Crystal Guava farming in Plaga village, Petang District, Badung Regency. The results of the analysis have several eligibility criteria, including:

1) Net Present Value (NPV)
   Based on the results of calculations that have been carried out with the interest rate of Bank Rakyat Indonesia of 10%, the NVP value obtained is 28.50%, this shows that Crystal guava farming in Plaga village, Petang District. Badung Regency is feasible to run NPV with a positive value or NPV greater than zero (NPV > 0).
2) Internal Rate of Return (IRR)
   Based on the results of the calculations that have been carried out using a factor discount of 10%, an IRR value of 10.80% is obtained. This shows that the IRR value is greater than the Bank's interest rate value that has been determined.
3) Payback Period (PP)

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Based on the results of the research that has been carried out, the PP value of crystal guava farming is 1 year, 2 months, and 2 days. The value obtained shows that all investment costs incurred by crystal guava farmers in Plaga village, Petang District. Badung Regency can be returned in the second year. This shows that crystal guava farming is feasible to run.

4) Profitability Index (PI)
Based on the results of the study, shows that the value of PI = 6.54 is greater than one (PI > 1) which means that crystal guava farming gets a predicate worthy of being run or accepted.

4. Conclusion

Crystal guava farmers are the main actors in the application of cultivation. The application of good and correct cultivation in the IFE analysis received the highest score of 0.200 so it was influential and effective in increasing the productivity of crystal guava. There are five factors each of the highest internal and external factors in increasing the productivity of crystal guava where internal factors consist of strength factors and weakness factors, external factors consist of opportunity factors and threat factors. The results of IFE and EFE analysis on Matiks IE found that the crystal guava of Pelaga village is in a strong position and has opportunities so that 7 strategies are obtained: 1). Collaborating in raw material research, raw material supply chain, and alternative raw material packaging, 2). Developing product diversification that has the identity or characteristics of Pelaga through the results of strategic research, 3). Conduct periodic performance assessments, 4). preparing alternative strategies for the supply chain of raw materials to distribution, 5). Designing farmer group cooperation to secure market prices, 6). Development of production SOPs through adjustments and approaches to local culture, 7). Establish integrated promotion management. Based on the results of the feasibility test, this farming is feasible to run.

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