

# Stevia Development Strategy In The Village Of Mekarsari Sub District Cikajang District Garut West Java Province

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**Abstract.** Stevia is one of the commodities that has not been widely known to be tried by farmers but has begun to be developed in the village of Mekarsari Cikajang District Garut West Java by a farmer who is also head of the Village. As a new commodity is not easy to accept and requires a certain strategy for farmers to be interested in stevia farming. This research aims to identify a recommended strategy for developing stevia commodities in Mekarsari village. The research method uses case study with surveys and interviews while data analysis used IFE, EFE, and IE matrix analysis, and to make the decision used QSPM matrix analysis results. The study results showed that the Stevia development strategy in Mekarsari village has a high opportunity and to make it farmers to develop stevia if it is done with the showing the increase of stevia farmer life in material (financial) compared with the farming activity before. it will lead the farmers to try to farming stevia

## 1 Introduction

Stevia is one of the potential sugar producing plants, especially for people who pay attention to health but love sweetness. Stevia plant can be developed as one of the natural sugar raw materials (sweeteners) that are safe to consume. The sweetness level of stevia reaches 200 - 300 times that of cane sugar with a very low caloric level. As one of the agricultural commodities producing natural sweetness, stevia is also low in calories but is still not very well known by the community, especially farmers. The main concentration of agricultural production is carried out by farmers only on food crops, horticulture and plantations and is the dominant commodity in West Java.

Stevia began to develop limitedly in West Java since 2002 in several areas including Garut Regency (Cikajang), based on a preliminary survey known that the village of Mekarsari, Cikajang district is the place for collecting stevia commodities in West Java.

On the production process (on-farm) stevia plants still finite and only by individuals. Stevia plant business in Garut first began to be cultivated in 2015 in Baruear area Cigedug district with an area of 5000 m<sup>2</sup> and now (2017) grown more than 1 Ha, but if looking by number of farmers from the beginning until now tend constantly

To improve and develop stevia as an agricultural commodity that has more value and can bring advantage to farmers is also not free from various obstacles both from internal and eksternal environment. Research on the development of stevia commodity is interesting because from a business perspective it has not attracted

farmers to try it, but in terms of the area of land cultivated is increasingly widespread although number of farmers remains. This makes researchers interested in study stevia development strategy in Mekarsari Village. This is a challenge for the existence of stevia commodity farming to become one of the mainstay commodities so other farmers and community can joint to develop stevia especially in the village of Mekarsari sub district Cikajang District Garut West Java Province

## 2 Research Methods

The research was conducted in The Village Of Mekarsari District Cikajang Garut Regency, West Java by using case study. Data used in this study are primary data and secondary data with the process of extracting data is carried out as follows:

1. Primary data obtained by interview to respondent with interview guidelines
2. Secondary data, obtained from agencies related to this research and also from various journals and research results

## 3 Data Processing and Analysis

Data analysis was performed using the strategy analysis method according to [1] has the following stages:

### 3.1 Data collection (input stage)

Data collection is carried out to find out the environmental internal and external factors of the research to further created matrix IFE/IFAS (internal factor evaluation / internal factor analysis summary) and matrix EFE/EFAS (external factor evaluation/external factor analysis summary)

### 3.2 Matching stage

Matching stage is a follow-up analysis of IFAS and EFAS matrices made into IE matrices (internal and external). Matrix IE consists of 9 (nine) cells grouped into 3 main groups of strategies where each part consists of 3 cells namely:

- 1) Growth and development strategies consisting of cells I, II, IV. Intensive strategy (market penetration, market and product development) or integrative (back-to-back, front and horizontal integration)
- 2) Defense and maintenance strategies consisting of cells III, V, VII. Market penetration and product development strategies are widely used
- 3) Harvest or divestment strategy consisting of cells VI, VIII, IX

### 3.3 Decision stage

The decision-making process is the final stage of strategic analysis that must be done, this stage is made matrix QSPM (Quantitative Strategic Planning Matrix). Matrix analysis (QSPM) is used to evaluate strategies objectively based on major internal-external success factors.

## 4 Results

As one of the agricultural commodities producing non-caloric sweetness, stevia is widely used and commercialized in several countries such as the United States, Korea, Japan and China. Stevia which is commercialized in Japan comes from Indonesia precisely from Mekarsari Village. The planting of stevia in Mekarsari village was initiated by the village head who is also a farmer stevia to conduct a marketing contract with PT. Tokinoto Agro Utama whose destination is State of Japan. Results of surveys and field interviews obtained several things related to internal and external factors in the development of stevia commodities in Mekarsari Village.

### 4.1 Data collection (input stage)

Internal environmental analysis consisting of strengths and weaknesses provides stevia development information in Mekarsari Village consisting of several components.

**Table 1.** Strengths and Weaknesses of Stevia Development in Mekarsari Village

| No              | INTERNAL STRATEGIC FACTORS  | Weights | Rating | TOTAL SCORE |
|-----------------|---|---------|--------|-------------|
| <b>Strength</b> |   |         |        |             |
| 1               | Available land with suitable ecosystems   | 0.084   | 4      | 0.335       |
| 2               | There are Field personnel from partner companies for consultation on the stevia cultivation process | 0.039   | 2      | 0.119       |
| 3               | Support from the village head   | 0.063   | 3      | 0.190       |
| 4               | Stevia is planted only once for a production period of more than 5 years                            | 0.061   | 3      | 0.184       |
| 5               | Seeds prepared by partner companies   | 0.076   | 3      | 0.227       |
| 6               | The production results are accommodated by partner companies  | 0.063   | 4      | 0.254       |
| 7               | Making processed products (a mixed leaf of tea and stevia)  | 0.055   | 3      | 0.166       |
| <b>Weakness</b> |   |         |        |             |
| 8               | Large Capital is required for farming   | 0.074   | 3      | 0.221       |
| 9               | Not widely known  | 0.061   | 2      | 0.123       |
| 10              | Limited number of cultivation experts   | 0.063   | 2      | 0.127       |
| 11              | Standard of production (cultivation) does not yet exist   | 0.067   | 2      | 0.135       |
| 12              | No post-harvest handling standards yet  | 0.063   | 2      | 0.127       |
| 13              | Accustomed to using sugar cane  | 0.074   | 3      | 0.221       |
| 14              | Market only one allows low bargaining position of farmers   | 0.072   | 3      | 0.215       |
| 15              | Partner company only buys wet produce   | 0.063   | 4      | 0.254       |

Analysis of strategic factors internal environment the greatest strength of stevia development in Mekarsari Village is the availability of land with a suitable ecosystem of 0.335 and the biggest weakness is that the partner company only buys wet products with a score of 0.254. The IFE matrix score of 2,896 is at the level of average internal strength to avoiding weakness. So it takes effort and caution in using strengths to reduce weaknesses.

### External Environment

External environmental analysis consisting of opportunities and threats provides information about the factors needed to develop stevia in the village of Mekarsari which consists of several components, including:

**Table 2.** Opportunities and threats of Stevia Development in Mekarsari Village

| NO                   | STRATEGIC FACTORS EXTERNAL   | Weights | Rating | TOTAL SCORE |
|----------------------|--|---------|--------|-------------|
| <b>Opportunities</b> |  |         |        |             |
| 1                    | Trend of Healthy life  | 0.102   | 3      | 0.305       |
| 2                    | Price is higher than sugar   | 0.102   | 4      | 0.407       |
| 3                    | Still a few who farming stevia   | 0.084   | 4      | 0.335       |
| 4                    | Mekarsari Village as center of Indonesian stevia production                                  | 0.091   | 4      | 0.364       |
| 5                    | Making stevia processing agro-industry (developing processing technologies)                  | 0.105   | 2      | 0.211       |
| <b>Threat</b>        |  |         |        |             |
| 6                    | Increased prices for agricultural production facilities                                      | 0.084   | 3      | 0.251       |
| 7                    | There is no standard price for stevia products   | 0.098   | 2      | 0.196       |
| 8                    | Farmers are accustomed to growing vegetables and plantation crops                            | 0.051   | 3      | 0.153       |
| 9                    | Accustomed to consuming sugar and unfamiliar with stevia sweeteners                          | 0.084   | 3      | 0.251       |
| 10                   | There has no legal support in the stevia downstream industry                                 | 0.091   | 3      | 0.273       |
| 11                   | It is only focused as a location for planting and its product destined for the export market | 0.109   | 4      | 0.436       |

Result analysis of external strategic factors, the greatest opportunity for stevia development in Mekarsari Village is a higher price than sugar with a score of 0.407, and the biggest threat is only as a planting location and it's a product intended for the export market with a score of 0.436. The result of EFE matrix analysis shows a score of 3,182 where the score

indicates a large enough opportunity to avoiding threats by involving other parties.

### 4.2 Matching stage analysis

The result analysis from IFE and EFE matrix, be made matrix IE (Internal external) which shows that the analysis of stevia development strategy in Mekarsari Village is in the second cell namely growth and development.

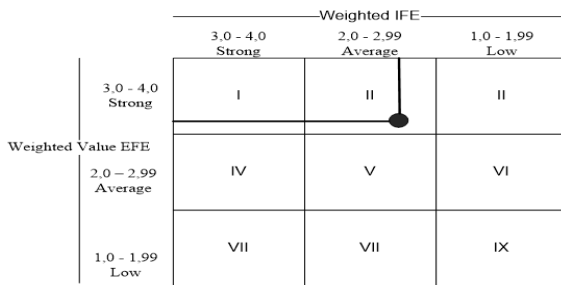


Fig. 1. Matrix IE

The second cell is a growth and development strategy where growth is seen from the increase in the area of stevia production land and also coaching supported by research results through IE matrix analysis that stevia development in Mekarsari Village is currently fully supported by the village government.

### 4.3 Decision stage

The decision-making stage is the decisive stage to take action in order to develop stevia commodity in Mekarsari Village. At this stage, there are several alternative options. Processed development Product based on stevia raw materials, market development and penetrate the market. The results of the calculations at this stage are as follows:

Table 3. QSPM Stevia Development in Mekarsari Village

| Internal and External Strategic Factors   | Weight       | Socialization and stevia demonstration plot |              | Showing Improvement Of life Stevia Farmers By Materials (Finance) |              | Production Market Guarantee |              |
|---|--------------|---|--------------|---|--------------|-----------------------------|--------------|
|   |              | AS  | TAS          | AS  | TAS          | AS                          | TAS          |
| <b>Strength</b>   |              | AS  | TAS          | AS  | TAS          | AS                          | TAS          |
| Available land with suitable ecosystems   | 0.084        | 2   | 0.168        | 2   | 0.168        | 4                           | 0.335        |
| There are Field personnel from partner companies for consultation on the stevia cultivation process | 0.059        | 2   | 0.119        | 2   | 0.119        | 3                           | 0.178        |
| Support from the village head   | 0.063        | 4   | 0.254        | 4   | 0.254        | 4                           | 0.254        |
| Stevia is planted only once for a production period of more than 5 years                            | 0.061        | 3   | 0.184        | 4   | 0.245        | 2                           | 0.123        |
| Seeds prepared by partner companies   | 0.076        | 3   | 0.227        | 3   | 0.227        | 2                           | 0.151        |
| The production results are accommodated by partner companies  | 0.063        | 3   | 0.190        | 3   | 0.190        | 2                           | 0.127        |
| Making processed products (a mixed leaf of tea and stevia)  | 0.055        | 3   | 0.166        | 3   | 0.166        | 2                           | 0.110        |
| <b>Weakness</b>   |              | AS  | TAS          | AS  | TAS          | AS                          | TAS          |
| Large Capital is required for farming   | 0.074        | 4   | 0.294        | 4   | 0.294        | 3                           | 0.221        |
| Not widely known  | 0.061        | 4   | 0.245        | 2   | 0.123        | 3                           | 0.184        |
| Limited number of cultivation experts   | 0.063        | 3   | 0.190        | 4   | 0.254        | 3                           | 0.190        |
| Standard of production (cultivation) does not yet exist   | 0.067        | 2   | 0.135        | 2   | 0.135        | 3                           | 0.202        |
| No post-harvest handling standards vet  | 0.063        | 2   | 0.127        | 3   | 0.190        | 2                           | 0.127        |
| Accustomed to using sugar cane  | 0.074        | 3   | 0.221        | 3   | 0.221        | 2                           | 0.147        |
| Market only one allows low bargaining position of farmers   | 0.072        | 3   | 0.215        | 4   | 0.286        | 3                           | 0.215        |
| Partner company only buys wet product   | 0.063        | 4   | 0.254        | 3   | 0.190        | 3                           | 0.190        |
| <b>Opportunities</b>  |              | AS  | TAS          | AS  | TAS          | AS                          | TAS          |
| Trend of Healthy life   | 0.102        | 4   | 0.407        | 4   | 0.407        | 4                           | 0.407        |
| Price is higher than sugar  | 0.102        | 2   | 0.204        | 4   | 0.407        | 2                           | 0.204        |
| Still a few who farming stevia  | 0.084        | 4   | 0.335        | 3   | 0.251        | 4                           | 0.335        |
| Mekarsari Village as center of Indonesian stevia production   | 0.091        | 3   | 0.273        | 3   | 0.273        | 3                           | 0.273        |
| Making stevia processing agro-industry (developing processing technologies)                         | 0.105        | 3   | 0.316        | 4   | 0.422        | 4                           | 0.422        |
| <b>Threat</b>   |              | AS  | TAS          | AS  | TAS          | AS                          | TAS          |
| Increased prices for agricultural production facilities   | 0.084        | 1   | 0.084        | 2   | 0.167        | 2                           | 0.167        |
| There is no standard price for stevia products  | 0.098        | 3   | 0.295        | 3   | 0.295        | 4                           | 0.393        |
| Farmers are accustomed to growing vegetables and plantation crops                                   | 0.051        | 2   | 0.102        | 3   | 0.153        | 4                           | 0.204        |
| Accustomed to consuming sugar and unfamiliar with stevia sweeteners                                 | 0.084        | 1   | 0.084        | 3   | 0.251        | 3                           | 0.251        |
| There has no legal support in the stevia downstream industry  | 0.091        | 1   | 0.091        | 4   | 0.364        | 3                           | 0.273        |
| It is only focused as a location for planting and its product destined for the export market.       | 0.109        | 4   | 0.436        | 3   | 0.327        | 3                           | 0.327        |
|   | <b>1.916</b> |   | <b>5.613</b> |   | <b>6.378</b> |                             | <b>6.009</b> |

Analysis shows that the strategy should be done in order to developing stevia commodity in Mekarsari Village is market development. Currently, the farmers (actor) market of stevia farming is still dependent on export companies and the purchase of wet stevia products from farmers. Market development is carried out to guarantee the bargaining value of farmers and also to ensure the absorption of farmers products when product is getting bigger. Steps that must now be taken are exploring cooperation with herbal medicine producers that are widely developing in Indonesia, especially in Java (Central Java, East Java and West Java) and the Health industry. The most important thing for developing stevia commodities in Mekarsari Village is that local farmers can see an increase in the income (finance) of current stevia farming actors. In addition, it is also necessary to disseminate information and guarantee the absorption of farmers' production.

## 5 Conclusion

The biggest thing that causes the development of stevia is still limited to a few individuals even though the area of land continues to increase because other farmers in Cikajang District are accustomed to growing vegetables and the most important thing is that until now other farmers have not seen the fact that stevia commodity businesses have shown an increase in welfare (finance) such as luxury cars, big houses and so on.

If the material benefits in the form of income money appear tangible used for building a great house, purchasing a vehicle, and others, the farmer will without being told to try to do stevia farming.

Although in fact, currently that the same stevia farmers can increase the area of agricultural land from the result of stevia production to be used for stevia planting by buying the surrounding land.

## 6 Suggestion

The strategy in developing stevia in Makarsari Village, although it shows quite a large opportunity with natural conditions suitable to be developed, but because the current market is only one (to partner companies) and limited expertise and technology, further development will lead farmers attachment to the market very large so that the future will be a problem in itself if the production is on a large scale

## References

1. David, R. Fred dan Forest R. Pride. *Konsep Manajemen Strategis* (2016)