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MODEL OF DEVELOPMENT FROM ORGANIC FARMING DRAGON FRUIT: AN IMPLEMENTATION OF SUSTAINABLE AGRICULTURE

Ningsih Kustiawati[1], Halimatus Sakdiyah[2], Herman Felani[3]

[1, 3] Faculty of Agriculture, [2] Faculty of Agriculture,
University of Islam Madura,
INDONESIA.

[1] ningsihkustiawati@yahoo.com, [2] hsfeuim@yahoo.com, [3] felani.here@yahoo.com

ABSTRACT

The Model used in this study is the method of SWOT analysis. Based on the SWOT analysis towards organic farming fruits obtained six alternative strategy that is (1) Increase production volume of organic fruits (S-O Strategies). (2) Optimize the quality control on product and market existing (S-O Strategies). (3) Business management system Improvements and upgrading the managerial skills of farmers (W-O Strategies). (4) Build a STA (station Terminal Agriculture) (W-O Strategies). (5) Sought organic certification (Strategy S – T) and (6) till the packaging and label of the product through credit capital venture (W-T Strategies).

Based on the results matrix of the QSP analysis showsthat the best strategy that should be prioritised, namely strategyoptimize the quality control on products and marketsalready, the total value of the highest PURSE of 5,607. As for the sixth such strategies can be ranked by priority and the greatest BAG weights are as follows: (1) Optimising quality control on product and market existing (STAS = 5,607). (2) increase the production volume of organic fruits (STAS = 5,567). (3) Build the STA (station Terminal Agri) (STAS-= 5,418) (4) lobbies for packaging and label products through credit capital venture (STAS = 5,221). (5) Sought organic certification (STAS = 5,025) and (6) business management system Improvements and upgrading the managerial skills of farmers (STAS = 4,936).

Keywords: Organic farming, dragon fruit, sustainable agriculture, model development

INTRODUCTION

At this time, extensive acreage planting Dragon fruit rise both in Indonesia as well as in the countries of Asia and Latin America. The role of Dragon fruit plants that have medicinal benefits is already believed to be true. Dragon fruit is very instrumental in helping the process of digestion, preventing colon cancer and diabetes, containing a substance that is able to neutralize toxins (heavy metals). Lower cholesterol levels and blood pressure in addition to prevent coughing and asthma. High levels of potassium, protein, fiber, sodium and calcium is an excess of health Dragon fruit as fruit compared to other fruits. By having excess as the health benefits of Dragon fruit, with a system of organic farming will provide maximum efficacy with continued attention to the Dragon fruit is safe for consumption (*food safety attributes*), high content of nutrients (*nutritional attributes*) and environmentally friendly (*eco-labelling attributes*).

At first, Dragon fruit farm in the village of Blumbungan were still focusing on the main focus of conventional agriculture (non-organic). Along with the rise of government programs "Go Organic 2010", the Dragon fruit farm in the village of Blumbungan switched focus to organic farming. Since organic farming system was implemented, the quality of the fruit produced Dragon fruit is relatively good. While the purpose of marketing organic fruits to this day is a market in Jakarta. Although the new harvest twice and the results have not produced much

and haven't been able to fulfill the market demand in Jakarta, farmers have started to produce organic fruits.

But present conditions when the farmers had the freedom to plant anything and choose the desired cultivation techniques of organic agriculture has not shown developments that may either in terms of the number of principals as well as land area even when the Government has already initiated Programs Go Organic. In addition, the bargaining position of the farmer who is still low, cause the product price levels are still low. Various benefits obtained and felt by the principals of organic farming has become an attraction for conventional farmers. Therefore, formulating a proper model for the development of organic farming Dragon fruit is very necessary as the implementation as well as in order to realize a sustainable agriculture.

METHOD

This research was carried out as a descriptive analytic study of research to find the right interpretation of the facts, concerning the assessment of the identification of external factors i.e. opportunities, threats and internal factors i.e. strengths and weaknesses from organic farming fruits (Nasir, 1988). Identification of internal factors and external factors are then carried out a SWOT analysis as the implementation of organic agriculture development model of Dragon fruit. Research of flow I until the year III is presented in Figure 1.

In this study used two types of data sources primary and secondary data. Primary Data were data that is retrieved directly from the field is to do a live interview with the parties – related parties in this case, the Information Office of the Department of agriculture extension services of agriculture and forestry, organic farmers, Growers of organic Farmers, Semi conventional, Local community leaders, the author of the organic agriculture, Consumer/Market organic products. And Secondary Data were obtained by collecting written sources or documents from the Office of Village, district, Department of Agriculture, and from a variety of existing library books related to this research.

As for the sample interviewed are:

1. Farmers who carry out cultivating the fruit in a semi organic and still provide tolerance against the use of synthetic pesticides/fertilizers.
2. Conventional farmers who are in the process of cultivation is still relying on superior seeds, fertilizers and synthetic pesticides.
3. Pioneer of organic farming
4. Local character
5. Government officials from the Department of agriculture, Office of Public Information of agriculture and forestry, and districts.
6. Consumer/market organic dragon fruit

The next stage of data analysis was conducted examining the validity of the data. In this study used triangulation techniques with source i.e. by comparing and checking behind a trust degree movies information obtained. Technique of triangulation is a procedure in which researchers use more than one method that can be acquired independently of the information and data compiled (Hadi, 2005). With the technique of triangulation was done a comparison of things as follows:

1. Compare data observations with data the results of the interview.
2. Compare what people say in front of the public with what dikatannya in person.

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3. Compare the perspective of someone with a broad range of opinions and views on a wide range of learners.
4. Compare the results of an interview with the contents of a document that is related.

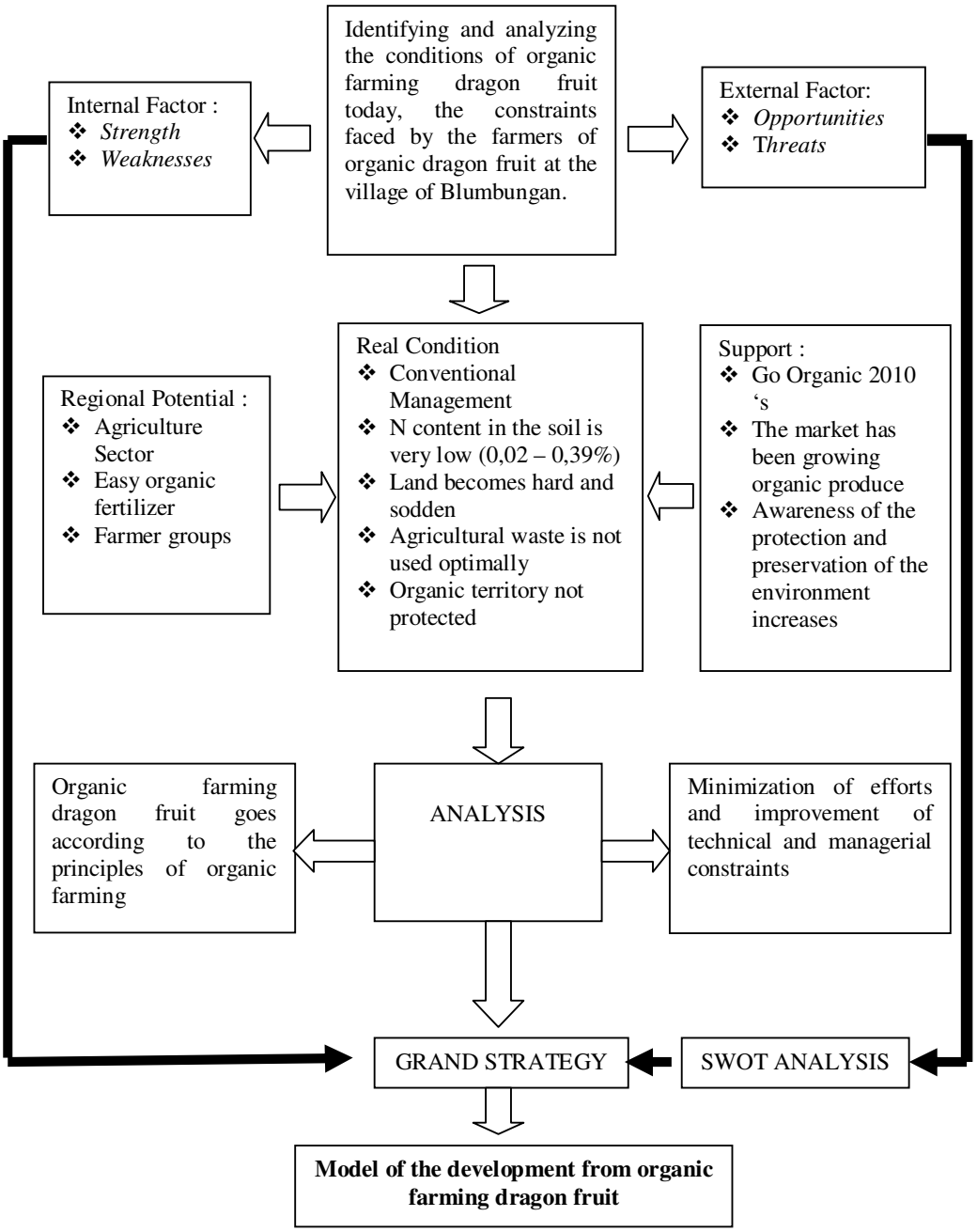

Figure 1. SWOT Diagram

Priority of the strategy is done by assessing the internal factors and external factors based on level of interest. Likert scale using opinion assessment later in the importance of data analysis using a scale rating (*rating scale*) that raw data is a number then interpreted qualitatively using the formula:

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$T_v = (T_e/T_{max}) * 100\%$

Where T_v = Total Value of which is used in Evaluation

T_e = Total Evaluation

T_{max} = Maximum Value is reached

The alternative answers used:

a. Very important:4
b. Important:3
c. Quite important:2
d. Less important:1

RESULTS AND DISCUSSION

The Identification of Internal Factors

Factors that are analyzed to identify strengthsthe internal weaknesses of organic farmers and fruit, among other factors:marketing, production and operation, human resources, finance,research and development as well as management information systems.The strengths and weaknesses of organic agriculture which is owned by Dragon fruit in the village of Blumbungan sub-district of Ban Pamekasan can be seen in table 1. The Following:

Table 1. The strengths and weaknesses of organic farming Organic Fruits in the village of Blumbungan, district restrictions, Pamekasan

Factor Internal	*Strenghts*	*Weakness*
Marketing	Good fruit Quality of the production results. Already have the market anyway.	Yet have the certification organic, packaging and label own brand.
Production and Operation	The climate and soil conditions that fit and both with organic crops. Ease of access to production inputs such as fertilizer and organic medicine	Productivity result sproduction is still low. Technology production yet use screen house. Not implementing sorting and grading
HR	-	The system of organization and coordination farmers group yet well structured. The Ability Of farmer for Archive data production and finance yet structured with a neat and written. The lack of a special Dragon fruit Research Institute
Finance	-	Farmers to develop capital Limitations agriculture organic.
R & D	Support the training of gapoktan to develop a fertilizer and organic pesticides.	-
SIM	-	Yet implementing SIM in the managerial system.

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Identification of External Factors

Based on the results of the analysis of the external factors of organic fruit farm, shows the opportunities and threats faced by farmer. As for the aspects that are reviewed include: factor of political, economic, social, culture, demographics, technology and competition. As for the opportunities and threats faced by organic agriculture Dragon fruit in detail can be seen in table 2.

Table 2. Opportunities and threats faced by the organic farming of Dragon Fruit in the village of Blumbungan, district restrictions, Pamekasan

Factor External	*Opportunities*	*Threats*
Politics	The Government's policy regarding "Go Organic 2010 "and support fordevelop organic farming.	Difficult and expensive requirementsto obtain the certificationorganic
Economy	The Existence Of opportunities market fruit. Organic the broad, good in and outside the country. Opportunities cooperation and partnering with the Government and or the other in terms of capital or assistance business credit. Low price fluctuations that affect the height of R/C ratio. The high profits that it can serve as an alternate replacement for tobacco farming.	-
Social	The Availability Of labor the potential in the labour market orthe surrounding environment. The level of public awareness of the importance of health and food organic the more increased each year.	-
Culture	The existence of a cultural society which began tolove to consume the fruit.	-
Demographics	-	Income level the community average still low.
Environment	Organic agriculture helps repair damaged ecosystems.	-
Technology	Development of science and technology agriculture organic the increasingly sophisticated.	-
Competition	The ability to create and market compete with agricultural products others.	Network distribution and marketing competitor was more extensive.

Analysis of IFE and EFE Matrix

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Based on the results of the calculations in a table, matrix IFE,obtained that weighted score total value amounting to 2,258. Of the total of the weighted score can be concluded that organic farming the fruit has an internal position is weak because it is below the value of 2.50. This suggests that the organic farmer Dragon fruit has not been capable of harnessing the power of belonging and being able to address the weaknesses that exist. The main strength of the organic farming the fruit is already has a fixed market, with a score of 0,342. Although in this case, the market is still organic Dragon fruit is the traditional market. While the main disadvantages of organic farming fruits that have not been applied to the managerial system in the SIM with a score of 0,045.

Based on the results of the calculations in a table, matrix, EFE obtained that weighted score total value amounted to 2.974. This suggests that organic farming has been relatively strong dragon fruit in utilizing the opportunity to tackle the threat. Opportunities organic farming the main Dragon fruit is the Government's policy regarding "*Go Organic 2010*" and support to develop organic farming, with a score of 0,252. While the primary threat to organic farming fruits namely distribution network and marketing competitor was wider, with a score of 0.250. Calculation of a more detailed can be seen in Table 4.

Table 3. IFE Matrix Analysis Results

No.	Internal Factors	Weights (a)	Rating (b)	Score (c = axb)
	Strengths			
1.	The quality of the good fruits of production results.	0,078	3.8	0,296
2.	Already have the market anyway.	0,090	3.8	0,342
3.	The climate and soil conditions are suitable and goodwith organic crops.	0,076	3.8	0,288
4.	Ease of access to production inputs such as fertilizer and organic medicine	0,069	3.8	0,262
5.	Support the training of Gapoktan fordeveloping organic fertilizers and pesticides.	0,070	3.0	0,210
	Weakness			
1.	Don't have organic certification, packaging andown brand labels.	0,078	1.0	0,078
2.	Production results of productivity are still low.	0.075	1.7	0,127
3.	Technologyproductionyet use screen house.	0,066	1.4	0,092
4.	Not implementing sorting and grading	0,074	1.5	0.111
5.	The system of organization and coordination of farmers groupyet well structured.	0,069	1.8	0,124
6.	The ability of farmers to archive production dataand finance have not been structured and written neatly.	0,078	1.5	0,117
7.	The lack of a special Dragon fruit Research Institute	0,058	1.2	0,070
8.	Farmers to develop capital Limitationsorganic farming.	0,074	1.3	0,096
9.	Yet implementing SIM in the managerial system.	0,045	1.0	0,045
	Total Score matrix IFE	*1,000*		*2,258*

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The final stage of the analysis of the formulation of the strategy is the selection the best strategy using matrix analysis tool QSP (*Quantitative Strategic Planning Matrix*). Matrix analysis of the QSP is used to evaluate the relative attractiveness from the results of the analysis generated by the matrix of SWOT.

Based on the results matrix of the QSPM analysis in Appendix table 1 visible. that the best strategy that should be prioritised, namely strategy optimize the quality control on products and markets already, the total value of the highest PURSE of 5,607. As for the sixth such strategies can be ranked by priority and the greatest BAG weights are as follows:

1. Optimize the quality control on products and market sexisting (STAS = 5,607).
2. Increase the volume of production of organic fruits (STAS = 5,567).
3. Build a STA (station Terminal Agri) (STAS-= 5,418).
4. Animate packaging and product labels through the capital credit effort (STAS = 5,221).
5. Pursuit of organic certification (STAS = 5,025).
6. Repair and improvement of business management systemmanagerial capability of farmers (STAS = 4,936).

Table 4. EFE Matrix Analysis Results

No.	*External Factors*	*Weights (a)*	*Rating (b)*	*Score (c = axb)*
	Opportunities			
1.	The Government's policy regarding the"Go Organic 2010 "andsupportfordeveloporganic farming.	0,084	3.0	0,252
2.	The presence of organic fruit market opportunities,both in and outside the country.	0,073	2.7	0,197
3.	Collaboration and partnering with Government and or other parties in terms of capital or credit relief effort.	0,071	3.2	0,227
4.	Low price fluctuations that affect the height of R/C ratio	0,069	2.8	0,193
5.	The high profits that it can serve as an alternate replacement for the farming of tobacco	0,071	3.0	0,213
6.	The availability of labour potential in the labour market or the surrounding environment.	0,074	2.8	0,207
7.	The level of public awareness of the importance of health and organic food growing each year.	0,080	3.0	0,240
8.	Agriculture organic help repair damaged ecosystems.	0,064	3.2	0,237
9.	The development of science and technology organic farming is increasingly sophisticated.	0,068	3.5	0,238
10.	The Existence of culture community the fond consume the fruit.	0,056	2.8	0,157
11.	The Ability Of make a market and compete with other farm products.	0,053	2.5	0,132
	Threats			
1.	Difficult and expensive organic certification requirements.	0,068	3.2	0,218
2.	The level of average Community incomes stilllow.	0,076	2.8	0,213
3.	Distribution network and marketing competitor already more broadly.	0,083	3.0	0.250
	Total Score matrix EFE	1,000		2.97 4

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CONCLUSIONS AND SUGGESTIONS

IFE matrix analysis results obtained that the total weighted score value amounting to 2,258. Of the total of the weighted score can be concluded that organic farming the fruit has an internal position is weak because it is below the value of 2.50. This suggests that the organic farmer Dragon fruit has not been capable of harnessing the power of belonging and being able to address the weaknesses that exist. The main strength of the organic farming the fruit is already has a fixed market, with a score of 0,342. Although in this case, the market is still organic Dragon fruit is the traditional market. While the main disadvantages of organic farming fruits that have not been applied to the managerial system in the SIM with a score of 0,045.

While the results of the analysis of a matrix of EFE obtained that weighted score total value amounted to 2.974. This suggests that organic farming has been relatively strong dragon fruit in utilizing the opportunity to tackle the threat. Opportunities organic farming the main Dragon fruit is the Government's policy regarding "*Go Organic 2010*" and support to develop organic farming, with a score of 0,252. While the primary threat to organic farming fruits namely distribution network and marketing competitor was wider, with a score of 0.250.

To select the best strategy and analysis tool used is the matrix of the QSP (*Quantitative Strategic Planning Matrix*). So QSPM matrix analysis results visible that the best strategies that must be prioritized strategies that optimize quality control on products and markets that already exist, the total value of the highest PURSE of 5,607. As for the sixth such strategies can be ranked by priority and the greatest BAG weights are as follows:

1. Optimize the quality control on products and markets existing (STAS = 5,607).
2. Increase the volume of production of organic fruits (STAS = 5,567).
3. Build a STA (station Terminal Agri) (STAS-= 5,418).
4. Animate packaging and product labels through the capital credit effort (STAS = 5,221).
5. Pursuit of organic certification (STAS = 5,025).
6. Repair and improvement of business management systemmanagerial capability of farmers (STAS = 4,936).

RECOMMENDATIONS

Based on the above conclusions and the situation that developed at this time, the suggestion that we can pass on to organic fruit growers in particular and to the Government of Pamekasan is as follows:

Advice to Farmer's Organic Fruits

1. To control the product quality of organic fruits, farmers may follow up with good guidelines or technical guide the cultivation of organic farming in accordance with Department of Agriculture recommended by Pamekasan so that organic farming practices can be run in a holistic (integrated).
2. Organic Dragon Fruit Market may be realized through partnership with the system of supermarket/grocery store.
3. Organic Farmers are expected to enhance cooperation, both with other farm groups who are more experienced in organic farming practices, as well as service related institutions, for example by making use of agricultural programs that attempted by the Government and the Government of the village of Blumbungan

Advice to the Government of Pamekasan

1. Do more intensive socialization and training on organic agriculture in collaboration with various groups and figures per diver who had been already engaged in the development of organic farming.
2. Provide incentives or compensation for farmers who practice organic farming just starting out. In addition to spur excitement, incentives could also be seen as environmental improvement efforts.
3. Develop models of cooperation the new who could be great to be able to prosper as well as facilitate the peasant farmers to one of them by building a Terminal station of agribusiness (STA) as an attempt to accommodate several kinds of agricultural commodities so that farmers can set market prices, increasing farmers ' bargaining power, as well as the continuity and product availability for the consumer is assured.
4. Development organic farming making it possible for many people to learn how to practice organic farming can be implemented properly.
5. Assistance in the form of livestock should be allocated to the central areas of organic agriculture. This is an effort to develop a system of integrated crop-livestock in order to realize the practice of organic farming as a whole (holistic).

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