

The Analysis of Value Added Products of Jengkol into J Chips in Padang Village, Manggeng District, Aceh Barat Daya Regency

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Abstract:

Processing dogfruit into dogfruit chips is one of the potential products to be developed. This study aims to analyze the added value of dogfruit chips using the Hayami method. There are three variables used in this method, namely (1) Output input and price; (2) Revenue and profit and (3) Margin. From the results of the analysis of the production of dogfruit chips, using 10 kg of dogfruit as raw material which produces 7 kg of jengkol chips. The input price for raw material for dogfruit chips, namely dogfruit and edible oil, is Rp. 15,000 per production cycle. The added value obtained is Rp.14,000/kg with the production of 7 kg of dogfruit chips in one production process. Value added ratio 60%.

Keywords:

value added analysis; hayami method; jengkol chips

I. Introduction

The agricultural sector in Indonesia today is able to make a major contribution in the development process along with the increase in other sectors. The growth of the agricultural sector is a fairly high growth target. (Ismini, 2010). Value added is a level of ability to generate income in an area that is used to measure the level of prosperity of the people in a certain area with the assumption or allegation of all income being enjoyed by the community in an area (Tarigan, 2004). Added value is an addition to the value of a product before and after the product is produced and processed into a new, more interesting product, such as processing dogfruit into dogfruit chips.



Figure 1. Old Dogfruit



Figure 2. Location Point of Research Area of Southwest Aceh Regency

Source: Bappeda Aceh (2021)

Southwest Aceh Regency not only famous for its fragrant and fragrant sigupai rice, but oil palm plantations and including dogfruit plants that have been nationally certified because they have a softer texture with a less pungent aroma are the characteristics of legumes that thrive in the district nicknamed "Bumoe Brueh Sigupai". dogfruit in Southwest Aceh during the covid 19 pandemic is currently experiencing a price decline, previously the price of jengkol per kg was Rp. 9,000 – Rp. 12,000, but during the pandemic it fell to Rp. 7,000/kg-Rp. 5,000/kg all jengkol farmers felt restless with the drastic fall in the price of dogfruit. One way so that dogfruit can still be sold at a better price is to process it into dogfruit chips and can be added value from dogfruit products.

Table 1. Land Area and dogfruit Farmers, Manggeng District, Southwest Aceh

Village	Dogfruit Farmers	Land area
Farmers		
Field	59	96 ha
Pante King	15	10 ha

Source: Department of Agriculture and Food 2021

The formulation of the problem that can be identified is whether converting dogfruit products into chips can be added value from dogfruit products. The purpose of the study was to analyze the added value of dogfruit chips. The benefit of research is that the processing of products by creating a new product will improve the quality and added value of dogfruit.

II. Review of Literature

According to Waryat, et al. (2016) and Baroh,(2007) value added is a process of agricultural products that go through a process from farmers to processing and then produced so that they become a new product that can increase the usefulness of agricultural products and be able to increase competitiveness and generate added value from a product.

According to Suprapto, (2001) and Sudiyono, (2004) added value is a method that is able to create high added value and can benefit from a product that has been processed and produced into a new product.

III. Research Methods

3.1 Research Sites

This research was conducted in Padang Village, Manggeng District, and Southwest Aceh District. This location determination was made intentionally with the consideration that in Padang Village there are dogfruit plants and jengkol farmers who will process dogfruit products into dogfruit chips. The scope of this research is limited to the analysis of the added value of dogfruit into dogfruit chips.

3.2 Data Types and Sources

a. Primary Data

Primary data is data obtained from dogfruit farmers by direct observation and recording at the location which includes data on the need for raw materials, equipment and other input and output data taken in an average of one production cycle.

b. Secondary Data

Secondary data is data obtained from the Office of Agriculture and Food, namely data on dogfruit farmers in Manggeng District, Southwest Aceh Regency.

3.3 Population

The population in this study were jengkol farmers and there were 5 respondents of dogfruit farmers who wanted to convert dogfruit products into dogfruit chips in Padang Village, Manggeng District, and Southwest Aceh Regency.

3.4 Data Analysis

Value Added Analysis in analyzing the added value of dogfruit into chips using the Hayami method is due to the application of the Hayami method in the evaluation process of farmers who produce dogfruit into jengkol chips. The added value can be calculated by taking into account the interaction of the actors with their respective goals (Pamungkassari et al., 2018). The calculation of value added analysis with the Hayami model uses three variables, namely 1) output, input and price, 2) revenue and profit, 3) margin. The added value criteria are set as follows: if the added value > 0 , then the production of processing dogfruit chips provides added value, and if the added value < 0 , then the production of processing dogfruit chips does not provide added value (Febriyanti et al., 2017). The data obtained in the field are presented in tabular form and then analyzed according to research needs.

Table.1. The framework for Calculating the Added Value of the Hayami Method

VARIABLE	MARK
I Outut,Inut and Price	
1.Output(kg)	(1)
2.Input(kg)	(2)
3. Manpower (HOK)	(3)
4. Conversion Factor	(4) = (1)/(2)
5. Labor Coefficient (HOK/kg)	(5) = (3)/(2)
6. Output price (Rp)	(6)

	7. Labor Wages (Rp/HOK)	(7)
II	Revenue and Profit	
	8. Prices of raw materials (Rp/kg)	(8)
	9. Contribution of other inputs (Rp/kg)	(9)
	10. Value of output (Rp/kg)	(10) = (4) x (6)
	11.a. Value Added (Rp/kg)	(11a) = (10) - (9) - (8)
	b. Value Added Ratio (%)	(11b) = (11a) / (10) x 100%
	12. a. labor income (Rp/kg)	(12a) = (5) x (7)
	b. share of labor (%)	(12b) = (12a) / (11a) x 100%
	13. a. Profit (Rp/kg)	(13a) = 11a - 12a
	b. Profit rate (%)	(13b) = (13a) / (11a) x 100%
III	Margin	
	14. Margin (Rp/kg)	(14) = (10) - (8)
	a. Labor revenue (%)	(14a) = (12a) / (14a) x 100%
	b. Other input contributions (%)	(14b) = (9/14) x 100%
	c. Entrepreneur's profit (%)	(14c) = (13a)/14) x 100%

Source: Dalam Baroh (2007)

IV. Discussion

The object of this research is jengkol farmers who will convert dogfruit products into dogfruit chips in Padang Village, Manggeng District, Southwest Aceh Regency. The aim of farmers to process dogfruit into jengkol chips is to create new innovations from dogfruit by making it a snack or snack that has a higher selling value. The respondents from this study amounted to 5 farmers who changed jengkol products into dogfruit chips. The data obtained from respondents in this area is then processed according to the Hayami method (Table 1). The costs required by this dogfruit chips business are fixed costs, variable costs, and investment costs. These costs are shown in Table 2.

Table 2. Investment Costs, Fixed Costs and Variable Costs

Cost	Value (Rp)
Investment Fee	
Equipment	425,000
Variable Cost	70,000
Fixed cost	
Shrinkage	15,833
	15,833
Total cost	510.833

Source: Primary Data Analysis Processed 2021

Analysis of the added value of agricultural products can be done by calculating the added value per kilogram of raw materials for one production cycle Herdiyandi et al., (2017). The results of the analysis of the added value of the currypik dogfruit in Manggeng District can be seen in Table 3.

Table 3. The Framework for Calculating the Added Value of the Hayami Method

No	VARIABLE	MARK	Unit
I	Output, Input and Price		
	1. dogfruit Chips	7	Kg/production cycle

2. dogfruit	10	Kg/production cycle
Edible oil	5	Kg/production cycle
Total Input	15	
3. Labor	3	HOK
4. Conversion Factor	0.46	Kg/production cycle
5. Labor Coefficient (HOK/kg)	0.33	HOK/kg
6. Output price (Rp)	50,000	Rp/Kg
7. Labor Wages (Rp/HOK)	25,000	Rp/HOK
II	Revenue and Profit	
8. Prices of raw materials (Rp/kg)	7,000	Rp
9. Contribution of other inputs (Rp/kg)	2,000	Rp
10. Value of output (Rp/kg)	23,000	Rp
11.a. Value Added (Rp/kg)	14,000	Rp
b. Value Added Ratio (%)	60	%
12. a. labor income (Rp/kg)	8,250	Rp
b. share of labor (%)	0.59	%
13. a. Profit (Rp/kg)	5,750	Rp
b. Profit rate (%)	0.41	%
III	Reply to the owner of the factors of production	
14. Margin (Rp/kg)	16,000	
a. Labor revenue (%)	0.51	%
b. Other input contributions (%)	0.125	%
c. Entrepreneur's profit (%)	0.35	%

Source: Primary Data Analysis Processed 2021

From Table 3 it can be seen that from one production cycle of dogfruit chips, 10 kg of dogfruit raw material is used which is produce dogfruit chips as much as 7 kg. From these data, the conversion factor value is 0.46 kg/production, which means 1 kg of raw material use produces 0.46 kg of jengkol. The input price is obtained from data on the need for raw materials for the production of dogfruit 1 chips, namely dogfruit and edible oil of Rp. 15,000/kg per production cycle. Based on the analysis of the added value of dogfruit 1 chips in Padang Village, Manggeng District, Southwest Aceh Regency, a positive added value (>0) with an added value ratio of 60% was obtained.

By obtaining added value from jengkol products that are processed into jengkol chips, the framework for farmers to continue a sustainable dogfruit chips business is:

1. The goal to be achieved is by having a group of farmers who process jengkol products into jengkol chips, especially the jengkol chips business plan, namely: Can produce healthy snack products from jengkol for the Padang village area in particular, Can provide processed cassava especially cassava chips in the surrounding Deli Serdang area. And Helping the community's economy and can increase relatively high income.
2. The value preference that needs to be considered is that farmers who will continue their jengkol chips business must be willing to spend sufficient time in the processing of jengkol chips.
3. Supporting resources are jengkol products which are planted and produced by the farmers themselves. So it really supports the business for processing jengkol chips.

4. The ability of the actors involved, namely the ability of farmers who will continue their jengkol chips business must have the ability to process jengkol products into jengkol chips.
5. Economic environment
6. Strategy to achieve the goal, namely by making a marketing strategy for jengkol chips appropriately in order to gain profits.

V. Conclusion

Discussing the limitations of the research study, it is concluded that the added value obtained is Rp. 14,000 per kilogram with the production of 7 kilograms of dogfruit chips in one production process. The added value ratio is 60% above 50% which is included in the good category, but efficiency and effectiveness of the production process are needed to increase the added value of the product so that it can become an opportunity for future research.

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