

OPTIMIZING COSTING AND MARKETING IN THE CASSAVA PROCESSING INDUSTRY

Muhammad Aqil Muzammil¹, Annisya Putri¹, Salma Hanif Rohadatul Aisy¹, Lubby Daniel Jabbar¹, Miftakhul Hidayah¹, Imam Rofingi¹, Nida Alvi Zafrina¹, Rif'atul 'Amaliyah¹, Vidia Fadilah Rosid¹, Aldi Amirullah¹, Muhammad Hisyam Malik¹

¹ UIN Sunan Kalijaga, Yogyakarta

* 20103040116@student.uin-suka.ac.id

Abstract - *This research was carried out in Padukuhan Mojosari, Monggol Village, Kapanewonan Saptosari, Gunungkidul Regency. This research was carried out with the aim of improving and utilizing natural resources in Padukuhan Mojosari, Monggol Village, Kapanewonan Saptosari, Gunungkidul Regency. This research aims to analyze and identify factors that can increase the editing value in the utilization of processed cassava cracker products. The research methods used were literature studies, field observations, interviews with cassava cracker producers, and qualitative data analysis. The results of the research show that there are several factors that can increase the editing value in the use of processed cassava cracker products, including: Selection of quality raw materials and the cracker making process, Attractive packaging, effective marketing and distribution. This research starts from the problem and theoretical basis. The data obtained was then analyzed using descriptive analysis techniques (Descriptive Analysis Technique).*

Keywords: *Cssava Crackers, Natural Resources, Utilization*

1. INTRODUCTION

Indonesia is an agricultural country, where the main livelihood of the population is in the agricultural sector, Gunungkidul Regency is an area where the majority of people's livelihoods are farmers (farming), according to data from BPS (2021) for 60% of Gunungkidul people work as farmers. This is directly proportional to the conditions in the Monggol Village, Kapanewon Saptosari, Gunungkidul Regency, where the majority of the population's livelihoods are as farmers/with a percentage of 58.3 percent.[2] Likewise with the situation in Mojosari village, the majority of people work as farmers and livestock breeders.

In a year, farmers in Padukuhan Mojosari can harvest four times. The agricultural products produced are varied, ranging from peanuts, corn, cassava and so on. The July-August period is the harvest season for farmers who grow cassava. Farmers carry out the cassava harvest process collectively. Harvested cassava is put into bagor and taken to their homes to be processed as needed. Farmers in the Mojosari village sell cassava directly, but most of it is processed to become cassava.

The cassava price per kg ranges from 1700-2000, and the gapple price per/kg ranges from 2800-3000.[3] Seeing this, there needs to be an effort to increase the value of buying and selling cassava so that it has a higher price. One of the processed cassava products that has a high selling value is cassava crackers, but not all residents can process cassava into cassava crackers that are ready to sell. So far, farmers in Mojosari do not know the exact profit they will get if they sell cassava crackers. In addition, the marketing is still done conventionally so that the sales made so far are not optimal.

2. METHOD

Implementation of community service through agricultural product processing programs using qualitative methods. Data collection techniques use observation, practice, interviews and socialization. The initial stage of implementing the activity was that we observed processed cassava products in the community and interviewed several residents regarding the problems with the products they were selling. In the second stage, we decided to take cassava crackers as something that we would research and develop because it is a very potential product to be sold at competitive prices compared to other products. We took Mrs. Sutirah as our partner in conducting practices and data processing. In the third stage, we process the cassava cracker product, starting from whole cassava to cassava crackers ready to be fried. From the processing process we calculate how big the potential profit and increase in sales value of cassava crackers is. In the final stage, we briefed Ms. Sutirah regarding packaging and collaborated with local souvenir shops.

3. RESULTS AND DISCUSSION

The people of Gunungkidul are accustomed to making processed foods from

cassava, some of the famous foods include Gatot and Thiwul. However, both do not have a high selling value, not comparable to selling cassava crackers. Not all people in Gunungkidul know about making cassava crackers. After conducting research and observations, the author found that it takes a minimum of 3 days to make cassava crackers to get maximum results. The process for making cassava crackers is as follows:

Table 1. Tools and materials for making cassava crackers

No.	Material	Tool
1.	Cassava.	Coconut grater machine or traditional coconut grater tool.
2.	Clean water.	Knife.
3.	Cassava starch essence.	Steamer.
4.	250g tapioca flour (from the sediment of cassava juice).	Medium size tofu filter cloth.
5.	Coriander 5gr.	Medium size basin.
6.	Garlic 5 cloves (100g).	Coconut grater machine or traditional coconut grater tool.
7.	5ml food coloring	

In the process of making cassava crackers, 1kg of raw cassava is used.

1. Choose cassava that is not too old, not blue, then peel the cassava skin and wash until clean.
2. Soak cassava in clean water for approximately 15 minutes.
3. Drain the cassava from the soaking water, then grate the cassava using a grater until it becomes a smooth dough.
4. The smooth cassava dough is added with a little water and then squeezed out.
5. Leave the juice from the cassava overnight so that it settles and forms like flour.
6. The squeezed cassava starch is then mixed with cassava sediment which is like flour and mixed with ground spices (garlic, coriander and salt).
7. Knead the cassava dough which has been mixed with spices and added food coloring until it is smooth and shaped into an oval.
8. Steam the dough for about 5 minutes.
9. Place in the freezer overnight to firm up until ready to cut.
10. Thinly slice the denser dough and it's ready to be sun-dried.
11. Dry the dough for approximately two days (time may vary depending on sunlight conditions).
12. The dried cassava cracker dough is ready to be fried.

During the process of processing cassava crackers, there is a change in mass from 1 kg of cassava, such as from the process of raw cassava, then grated, there is a change in mass, where the grated cassava experiences an increase in mass from the initial mass of 1kg to 1.16kg, then when squeezed the mass of the cassava dough decreases to 451gr, after steaming and leaving it in the freezer until it became denser, there was a change in mass, namely increasing to 780gr, until after the drying process, the cassava dough shrank again to 411gr. So it was found that there was a mass shrinkage process of 41.1%.

Residents of Padukuhan Mojosari sell cassava crackers per/Kg around the price of IDR 25,000. with a production cost of around IDR 7,000. by calculating the price of cassava per 2.5 kg is IDR 4,500 plus food coloring and seasoning (garlic) for IDR 2,500. It can be seen here that there was an increase in the selling price of 357% from the original COGS.

We summarize the cost of production costs per 1 Kg of Cassava Crackers in the following table:

Table 2. Calculation of Cost of Goods Production

No.	Material Name	Price
1.	Cassava 2.5Kg	Rp. 4,500.00
2.	Seasonings to taste (garlic, coriander, and salt)	Rp. 2,000.00
3.	Food Coloring 5ml	Rp. 500.00
	TOTAL	Rp. 7,000.00

Cassava Crackers is a food that has a high selling value compared to other processed cassava products, the author tries to summarize the prices of other processed cassava products in units per/kg.

Table 3. Comparison of prices for processed cassava products

No.	Product name	HPP	Selling price/kg	Profit increase
1.	Raw Cassava	-	1.800	-
2.	Gaplek	1.800	2.800	155%
3.	Instant tiwul	3.000	500	166%
4.	Cassava Crackers	6.000	25.000	357%

So far, residents here only sell raw cassava crackers. There needs to be encouragement to sell cassava crackers widely and massively. So far, sales of cassava crackers have only been made if there is an order, if there is no order then no sales have been made. Therefore, we invite Mrs. Sutirah to expand the market, the new target market is local souvenir shops. To attract the attention of buyers, there needs

to be innovation so that the product looks attractive. We make updates to make it look attractive. Packaging for sales goods is an issue that must be updated so that consumers are interested in the packaging available. Because of the importance of product attributes in packaging, sellers must show the quality of the packaging and its attributes.

This is part of the strategy of market expansion so that sales can penetrate a wider market, not only limited to local residents. The product being sold is ready-to-consume cassava crackers, with a mass of 100 grams per pack and selling for IDR 8,000. Apart from that, it also sells raw cassava crackers with a mass of 150 grams at the same price. The cost of production is as follows:

Table 4. Cassava Crackers 100 gram Pack

No.	Material	Price
1	Cassava crackers per 100g	Rp. 700.00
2	Standing pouch	Rp 1,000.00.
3	Oil and gas	Rp 2,000.00.
4	Decal	Rp 500.00.
Total		Rp 4,200.00.

Table 5. Cassava Crackers Packaged 150 grams

No.	Material	Price
1	Cassava crackers per 150g	Rp. 1,100.00
2	Standing pouch	Rp 1,000.00.
3	Decal	Rp 500.00.
Total		Rp 2,600.00.

Based on the table above, there is a percentage increase in profits of 190% and 320% for 100gram packs of ready-to-eat cassava crackers and 150 gram packs of cassava crackers.

Around the Mojosari Padukuhan, there are two rest areas ready to operate, the first in the Jetis Village, Saptosari District and the second in the Paliyan District. Apart from that, there are also restaurants selling local product souvenirs, one of which is Telo Coffee. On August 16, 2023, the author collaborated with Telo Coffee management to help produce cassava crackers.



Figure 1. Sales of Cassava Crackers at Kopi Telo

Apart from collaborating with souvenir shops, the author also invites partners to make sales on social media, namely via Facebook. The price of cassava crackers per kg is sold for IDR 25,000.00 with a COD (Cash on Delivery) payment system. This step was taken so that the wider audience can buy cassava crackers directly without being limited by space and time.

The aim of marketing is to provide satisfaction to consumers by fulfilling their needs and desires for the services produced by the seller. Marketing activities implemented by the seller will be said to be successful if it is proven by an increase in sales volume and conversely the sales volume decreases if the marketing activities are not appropriate.

4. CONCLUSION

Based on the results of the research conducted, it can be concluded that cassava crackers provide more financial benefits compared to selling cassava which is made into cassava, raw cassava, or tiwul. The percentage increase in profits from cassava sales reached 357% compared to cassava which was only 155% and tiwul 166%. The percentage increase in profit is calculated from the cost of production carried out.

Sales of cassava crackers in Padukuhan Mojosari, Monggol Village, Saptosari District, Gunungkidul Regency have been standing still, only acquaintances or residents around Padukuhan buy cassava crackers which are processed by residents. To expand sales of cassava crackers, there needs to be innovation in packaging so that the product looks attractive in the eyes of buyers, with attractive packaging, sales of cassava crackers can enter gift shops and to increase consumers this can be done through online sales strategies such as Facebook, Shoppe or Tokopedia.

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