

CHIPICA (CHIPS SKIN CASSAVA) UTILIZING CASSAVA SKIN WASTE INTO HEALTHY PROCESSED PRODUCTS

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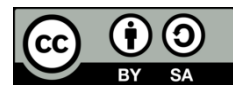
Utilization of Cassava Skin

Product Innovation

ABSTRACT

Cassava is a people's plant that is known throughout Indonesian and is a tropical annual tree. Cassava skin waste is a part of cassava that is generally not used and is wasted. In this case what is meant is the skin, so it becomes waste. There are two types of skin in this skin, namely inner skin and outer skin. This inner skin will be used as raw material for making healthy product, namely cassava skin chips. Cassava skin, which consists of a thin, brown outer layer of epidermis and a rather thick inner layer of dermis, has a high carbohydrate content which can be used as a new food source for humans.

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1. INTRODUCTION

Cassava is results agriculture that the amount is abundant and other alternatives are needed in its use to support program resilience food in accordance with PP Number 68 of 2002 concerning Resilience Food, food reserves, prevention, and overcoming of food problems because the main value of cassava is its high calorie value, fresh cassava contains 35-40% dry matter. And 90% of it contains carbohydrates (Sikha Amalia Sandia, 2019).

Integrated cassava processing is an effort to utilize all parts of cassava without wasting anything including the skin. Cassava skin waste is a part of cassava that is generally not used and thrown away. In this case, what is meant is the skin, so it becomes waste. On the skin there are two types of skin, namely the inner skin and the outer skin. The inner skin is what will be used as raw material for making healthy processed products, namely cassava skin chips. Based on a study, the content of cassava skin can be seen in the table below.

Table 1.1 Composition of Nutritional Value of Cassava Peel (Rukaman, 2007)

Substances food	Composition
Protein (in 100g)	8,11 g
Crude fiber (in 100g)	15,20 g

Pectin (in 100g)	0,22 g
Fat (in 100g)	1,29 g
Calcium (in 100g)	0,63 g
Nutrition (%)	74,73
Dry matter (%)	17,45
Crude fiber (%)	15,20
Ca (%)	0,63
P (%)	0,22

Based on table 1. skin cassava contain safe substances For consumed for body human beings. This is what makes it possible skin cassava can processed become snacks Healthy Because content carbohydrates, fiber, and nutrients other enough high. So that snacks Healthy from skin cassava become opportunity big For developed (Vina Anggilia Puspita, 2020:32).

Based on observation that existence waste skin enough cassava Lots Not yet utilized in a way economical Because only made as fertilizer compost or feed livestock. In order to increase mark economical skin cassava, need made a number of innovation use increase existing market opportunities, namely as material making product nutritious and cheap snacks price that is Chipica (Chips Skin Cassava) which is made into as opportunity promising and sustainable business.

2. METHOD

The implementation method used writer namely existence description the effort that will be implemented. The form of business that will be carried out is a home industry . In this case, the author carries out business by forming a business group that will develop the potential of natural resources in the surrounding area by creating an innovation in processed cassava skin products.

As for the plan Our target market is:

1. Souvenir shop
2. Supermarket
3. Grocery store
4. Self-service
5. Cooperative Cottage
6. Canteen School

Business analysis of healthy and nutritious snack products, cassava skin chips, includes a SWOT analysis, namely:

- a. Strength (advantages)
 1. Easy raw materials obtained
 2. Contain mark adequate nutrition tall
 3. Reduce pollution environment caused by waste agriculture specifically skin cassava
 4. Easy taste accepted
 5. Use quality materials and processes
- b. Weakness (weakness)
 1. Lack of information public about the benefits skin cassava

- c. Opportunity (opportunity)
 - 1. Coverage sufficient marketing wide
 - 2. Can in demand from various groups (children, teenagers, people adults, and parents)
- d. Threat (threat)
 - The emergence competitor new imitator our products.

3. RESULTS AND DISCUSSION

The product produced from this activity is the utilization of cassava skin which is processed and given the name Chipica (Chips Skin Cassava). The manufacture of this product aims to increase high economic value for the community. The implementation method used writer namely existence description the effort that will be implemented by forming a business group that will develop the potential of natural resources in the surrounding area by creating an innovation in processed cassava skin products. Cassava skin chips products that utilize cassava skin waste that is abundant in rural areas are very effective as a healthy and nutritious snack.

Expected output from this program is :

- 1. The creation product innovative in the form of processed healthy and nutritious chips skin different cassava from usually with various expected flavor variants capable interesting attention of consumers. Chips skin cassava processed become product healthy and nutritious snacks is contribution in diversification product food in Indonesia.
- 2. The creation opportunity business innovation improvement mark sell economical chips skin cassava.
- 3. Publication national and print media about innovation processed skin cassava in the form of processed healthy and nutritious chips skin cassava.

Here are the steps manufacturing of processed products cassava skin:

The implementation of the cassava skin chips manufacturing business program consists of 4 stages, namely: production preparation, production stage, packaging and marketing.

- 1. Preparation Chips Skin Cassava
 - a. Materials
 - 1) Skin cassava
 - 2) Cooking oil
 - 3) Brown sugar
 - 4) Coarse / fine salt
 - 5) Sugar
 - 6) Water
 - 7) Chocolate stem
 - 8) Ginger
 - 9) Chocolate strawberry stem
 - 10) Tamarind
 - 11) Chocolate Lemon stem
 - 12) Red onion
 - 13) Cayenne pepper
 - 14) Garlic
 - 15) Sodium bicarbonate solution (baking soda)
 - 16) Flour rice

- 17) Lime betel
- 18) Flour & crispy chicken

b. Tools

- 1) Gas stove
- 2) Frying
- 3) Basin
- 4) Mortar and pestle
- 5) Pan
- 6) Knife
- 7) Standing pouch
- 8) Product labels
- 9) Scales kitchen
- 10) Spoon
- 11) Spatula
- 12) Scissors
- 13) Drain fried food
- 14) Tray
- 15) Jar big
- 16) Gas

2. Making Chips Skin Cassava

- a. Preparation skin cassava. Cleaned skin cassava then washed clean with running water, after clean. Then boiled with clean water for 20 minutes for removes the bitter taste of the skin cassava said, then drained and done immersion with use sodium bicarbonate solution (baking soda) and soaking use lime betel for 10 minutes.
- b. After immersion for 10 minutes. Then drained and done frying on the skin cassava until ripe.
- c. Making process spice sweet spicy chips skin cassava. Puree it chili, ginger, onion red, onion white. Blended coarse. Saute the ground spices until fragrant. Add the acid Javanese which has been mixed with 1 glass of water (add in the water only). Next, add brown sugar, granulated sugar and salt. Correct the taste and wait until mixed and foamy, turn off stove and cool it. Lastly mix it up chips skin cassava and spices that have cooled Then mix well. Done and ready pack.
- d. Making process chocolate flavored seasoning (chocolate, chocolate strawberry, chocolate greentea). Put each chocolate in to in container and melt over hot water then mix it up chocolate with chips skin cassava until evenly, wait a moment and ready to be packed

3. Packaging

- a. Chips skin cassava that has been finished, next insert in standing pouch packaging and weighed in accordance with weight to be marketed later.
- b. Attach the product label to the standing pouch packaging, so that buyers know that that's it our products.

4. Marketing Chips Skin Cassava

In the marketing process, there are some alternatives that can be used for promote this product chips skin cassava. This chips skin cassava expected can more known many by the community around and also public general. Media in marketing This can both offline and online. Offline can be done with method introduction product in a way direct to consumers, with share informative brochure, giving example sample products. While online can done with promotion through Whatsapp, facebook, instagram, twitter, tiktok, and via online stores that can used in public crowded.



Figure 1. Chips Skin Cassava Ready to Sell

4. CONCLUSION

Through processing waste skin cassava This expected to increase community income and reduce cassava skin waste in the community. This can be used to explore the potential of the community in the economic sector, provide benefits to the community, namely providing information on the use of cassava skin as a material for making healthy and nutritious processed products, opening up new business opportunities, and increasing the selling value of healthy and nutritious processed cassava skin chips by creating the latest breakthroughs.

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