

## Marketing Research Efforts To Develop Products of Kerupuk Sanjai Bumbu Rendang

Risya Ladiva Bridha<sup>1</sup>, Eeng Ahman<sup>1</sup>, Woro Priatini<sup>1</sup>

<sup>1</sup>Indonesia University of Education, Jl. Dr. Setiabudhi No. 229, Bandung 40154, Indonesia

\* Corresponding Author. E-mail: [risyaladivabridha@gmail.com](mailto:risyaladivabridha@gmail.com) (Risya Ladiva Bridha)

### ABSTRACT

West Sumatra is a province that has a food characteristic of the region that is already known to the public, namely karupuk sanjai and rendang. Rendang with taste spicy and savory when paired with karupuk Sanjai the bargain, will surely give a new flavor to this historic food. Therefore, they invented a new product development of existing karupuk sanjai as souvenirs of West Sumatra is karupuk Sanjai bumbu rendang. Then karupuk Sanjai bumbu rendang will in consumer acceptance test, whether this new product can be accepted in the market or not. The method in this research using quantitative methods with experimental approaches and hedonic organoleptic test, test consumer acceptance, and his DKBM nutritional analysis. This study states that the product karupuk Sanjai rendang selected seasoning weighing 40 grams, the selected products compared with control products with significantly different results, karupuk Sanjai rendang seasoning has a higher nutritional value than at karupuk sanjai balado; karupuk sanjai bumbu rendang can be accepted by the community as the development of new products from previous karupuk sanjai.

Keywords: Marketing research; Product development; Karupuk Sanjai Bumbu Rendang

**First Received: April 2019**

**Revised: Mei 2019**

**Accepted: Mei 2019**

**Final Proof Received: Juni 2019**

**Published: Juni 2019**

## 1. Introduction

Indonesia is currently inundated with the arrival of foreign nationals who are on vacation or doing a job in Indonesia. The foreign nationals were impressed and really enjoyed the wealth in Indonesia. Wealth in Indonesia that has existed from ancient times is now revived by its citizens. The aim is to make the outside world more aware that there are still many natural, cultural and culinary tourism possessed by the State of Indonesia. One example is the Province of West Sumatra (West Sumatra), which has its capital city in Padang. This province strongly maintains the cultural values of the Minangkabau tradition which is reflected in the building which has the characteristics of a gadang house. "The city is located along the coast. Because this is the capital, all major government buildings here were built with Minangkabau characteristics that must be maintained, namely the roof of Bagonjong "(Suri, 2012, p.62). In the past, all buildings in this province were built using roofs like buffalo horns.

The natural and cultural wealth of the Minangkabau is complemented by the delicacy of its signature foods. Every city, region, district and municipality in West Sumatra has its own special food. Of the many historic foods in West Sumatra, there is one food that the whole world already knows and recognizes that food is the tastiest food in the world, the food is rendang. Suri (2012, p. 14) states that because of the popularity of rendang, this dish has entered the daily menu for people from other regions. In Tegal stall we can also find this food. Even with some seasoning adjustments to get it in the tongue.

In addition to rendang, there is also a special food from Minang which is always a souvenir when visiting West Sumater, namely Sanjai crackers. As released by Antaranews.com (2010) revealed, Sanjai crackers are a kind of cracker snacks from thinly grated cassava then fried and given salt as a flavoring. These crackers are very

popular as souvenirs for the typical town of Bukittinggi, Padang, West Sumatra. Sanjai crackers that are given balado seasoning are called karupuak balado.

Sanjai and rendang are both typical foods from the Minang realm. Rendang spicy and savory flavors when combined with fresh Sanjai crackers, will surely give a new taste to this historic food. To add variety to the Sanjai cracker flavors, the rendang sanjai crackers are made. With the new variations of Sanjai, it is hoped that it can increase the level of consumers who enjoy sanjai. Receiving power from consumers is needed to make a new product. Before the product is released, the product will be tested in appearance and taste first. Sensory assessment is also called organoleptic assessment or sensory assessment is the most primitive method of evaluation. The application of organoleptic assessment in practice is called organoleptic testing carried out by certain procedures (Susiwi, 2009, p. 2). Setyaningsih (2010, p. 4) said, the purpose of sensory analysis is to find out the response or impression obtained by the human senses to a stimulus which is produced by a product. Sensory analysis is generally used to answer questions about the quality of a product and questions related to differentiation, description, and liking or acceptance (affection). Therefore in advance to carry out organoleptic tests on these products. Marketing research is needed to determine market opportunities to sell a product. Rangkuti (2007, p. 1) said, the results of marketing research can be used to formulate marketing strategies in seizing market opportunities.

The formulations of the problem that are designed by the author include: What is the standard recipe (formula) of sanjai cracker products in West Sumatra rendang seasoning? How is the community's acceptance of the innovation of new products in Sanjai crackers in West Sumatra Rendang?

The purposes of this study are as follows: To find out the standard recipe for making sanjai crackers with rendang seasoning and To find out how the power received from the community of this Sanjai Rendang product.

## 2. Literature Review

### 2.1. New Product Concept

According to Tjiptono (2008, p. 395), the concept of a "new" product can be explored from two perspectives, namely (1) new to market which means that no company has produced or marketed the product before and / or (2) new to the company concerned (new to the firm), meaning that other companies have marketed the product but the company has not yet marketed it. Thus, the term 'new' here contains a relative meaning (a matter of degree). Broadly speaking, new product development activities can produce 6 types of new products: (1) New-to-the-world products, products that create an entirely new market and form a new product life cycle, (2) New product lines, which are new products for the company, but launched for existing markets. New product lines are estimated to cover around 20% of the total new product introductions, (3) Line extension, which is a new product that allows companies to expand the market served by offering different benefits. It is estimated that line expansion accounts for around 26% of total new product introductions, (4) Improvement of existing products, which are products that are usually designed to replace existing product offerings. It is estimated that this new product type covers around 26% of the total introduction of new products. The attack can be in the form of higher performance or perceived value, (5) Repositioning, namely technical development that allows a product to offer new applications and serve new needs, and (6) Cost reductions, i.e. versions of existing products that can provide

equivalent performance at lower price levels. Although not classified as really 'new' from a marketing perspective, this type can have an impact on the company's production process and competitiveness.

### 2.2. New Product Development Process: Sequential Model

Most companies have formal systems and processes for managing new product development programs. In general, these processes have similarities in terms of 6 main stages consisting of: (1) the emergence of ideas (idea generation) The process of developing new products begins with the search for ideas. New product ideas can come from a number of sources, such as research and development departments, consumers, scientists, competitors, employees (especially salespeople), members of distribution channels (distributors), and top management; (2) screening, The idea screening stage consists of a number of activities designed to evaluate new product concepts. Consequently, there will be many new concepts eliminated in this stage; (3) product development, Interesting ideas must be refined into product concepts that can be tested. There is a difference between product ideas, product concepts, and product images. The so-called product ideas are products that the company might offer to the market. The product concept is a more detailed version of an idea expressed in terms / forms / forms that are understood by consumers, while the product image is a special description obtained by consumers about products that are still potential or that are already actual.; (4) product / market testing, The purpose of this stage is to: (1) provide a more detailed assessment of the chances of success for a new product, (2) identify the final adjustments needed for the product, and (3) establish important elements in the marketing program that will be used to introduce the product in the market; (5) business analysis, The purpose of business analysis is to get the most

comprehensive picture possible of the financial impact that can be obtained from introducing a new product; and (6) commercialization, The commercialization stage involves planning and implementing a new product launching strategy to the market.

### 2.3. Rendang

Suri (2012, p. 14) said, rendang itself is a cooking process, it can also be interpreted as stirring or stirring the cuisine endlessly. The point is not too long to stand still without stirring. In Minangkabau itself, rendang is usually called samba.

There are some thoughts that rendang is food that is "preserved" intentionally or not. Not preserved using chemicals, but through a process of heating several times. A few decades ago when the Minang people went on the pilgrimage using a ship, they had brought rendang provisions, which were eaten piece by piece (Suri, 2012, p. 16).

According to Andalas University historian Gusti Asnan (Tempo.com, 2012), rendang was already there when the Minang began to migrate to the Malacca Peninsula through the Siak River, Kampar River, and the Malacca Strait, which took up to five weeks. Because during the trip there was no village, they prepared food supplies that were durable, namely rendang and jerky.

To make rendang requires ingredients that are certainly not small. In this dish, beef is cooked with herbs and spices, making the meat more delicious and fragrant when eaten. For cooking rendang the method used is Cooking By Moist Heat Method (stewing).

Cooking rendang takes a long time to get perfect results. The length of time is due to the maturation of spices, meat used and the process of thickening coconut milk into oil. Suri (2012, p. 75) said, in Minang, rendang meat became one of the dishes that is not to be missed. Sometimes it takes two days to cook. The first day is cooking coconut milk until oil rises or oil comes out

of coconut. On the second day then put the pieces of meat. Cook it using a furnace.

The equipment used for cooking rendang, namely:

#### a. Frying Spatula

Made of stainless steel or other metals, it is used to turn or stir food when fried or baked in the oven. The shape is somewhat varied. Length: 35 cm; 48 cm (Rumayar, 2011, p. 18).

#### b. Frying pan

The wok or cauldron that we usually hear is also the main equipment for cooking rendang. The cauldron used by housewives when cooking rendang is different in size from the size of the cauldron used by Padang restaurants. For the size of the cauldron in the household, of course the size is medium, and for the size of the restaurant uses a large size. Suri (2012, p. 72) says "this large cauldron is also called the scene. This cauldron has no ears as a handle. So in this longitudinal tub made 4 holes to put the scene. On the other side of the tub, there is a hole like a door for loading firewood."

Rendang is a type of side dish or samba that can be consumed with complementary foods. Minang people often provide supplements when cooking rendang. Complement is there to add to the pleasure of eating rendang, because if the meat has run out then this complement will be an option to eat rendang. Complement that is often found in this dish is small potatoes and box-cut sweet potatoes, there are other supplements that can be added to this food.

### 2.4. Kerupuk Sanjai

According to experts, before the American continent discovered cassava plants were known by residents of Brazil, Guyana, and South Mexico. Only in these areas can we get wild plants with a family of cassava (Sosrosoedirdjo, 1992, p. 7).

Sanjai crackers are typical souvenirs from Minangkabau. If you visit this province it feels less if you do not bring

souvenirs from this processed cassava. Released by Antaranews.com (2010) said, Sanjai crackers are a kind of cracker crackers from thinly grated cassava then fried and given salt as a flavoring. Sanjai crackers have 3 flavors, namely: original, balado, gulo saka.

### 2.5. Product Quality

To get a positive response from consumers, a food business must create a quality product. Products are everything that is tangible or intangible to be owned, felt, consumed or used to meet the desires and needs of consumers.

According to Adam & Ebert (1992; 256), states that "Quality is the customer's perception". This means that the customer assesses the quality of a product based on its perception. A product is said to be of quality if it meets the needs and desires of the buyer. Quality is determined by the customer, and their experience of the product or service. The following food quality that must be considered according to Marsum (2005, p. 159) are:

#### a. Flavor (taste / smell)

It must be noted that the taste must be good and the smell must be delicious.

#### b. Consistency (stability / determination)

The quality of the food / menu served must be maintained so that it is steady or good, both the quality, taste and aroma.

#### c. Texture / Form / Shape (composition / shape / piece)

In presenting the full menu there must be a light dish (ie an appetizer), a rather heavy dish (ie soup), followed by the heaviest dish (main course), then followed by another light dish, yakni dessert (or dessert). So it is not allowed to serve all the heavy dishes so that guests are not eaten anymore. Conversely also may not serve all mild dishes.

Texture / arrangement can also be interpreted as an effort to compile a complete dish that pays attention to the existence of dishes:

- 1) What's new is swallowed: an appetizer
- 2) Which is immediately swallowed: soup dishes in general
- 3) The new one is swallowed: the main course
- 4) Who immediately swallowed again: dessert, for example, various kinds of ice cream, pudding, bavaois, and so on.
- 5) What is meant by Form / Shape is a slice / piece of food served. The shape or pieces of food that are served should vary, may not be monotonous for all dishes, both starters, main dishes, and desserts. For example, the main dish in the form of steak / meat. In its presentation, the shape of the sliced meat should be made not the same as the sliced form of accompanying dishes, such as potatoes, carrots, beans, or other vegetables.

#### d. Nutritional / Content

The food served must still be considered nutritional content. Even though in the commercial food service industry (ie in all restaurants) food serving is prioritized, nutrition is prioritized, but that does not mean that in compiling menus it is possible to ignore this nutritional problem.

#### e. Visual appeal (attractiveness through sharp eyes)

In preparing a dish, it is necessary to pay attention to its appearance. The dishes must be arranged, arranged neatly, artfully and well so that they are truly interesting so as to create an appetite for guests.

#### f. Aromatic appeal (attractiveness through fragrant smell)

In preparing a dish, it should be noted also the aroma. The food served must be delicious / fragrant so it arouses the appetite of the guests. According to the investigation it turned out that the traction through the eyes was stronger than the traction through the fragrance of the food.

#### g. Temperature (heat / temperature)

This means that in serving food must be considered the temperature. Hot food must be served hot, with a hot plate. For cold

food, it must be served cold with a cold plate or place.

## 2.6. Organoleptic Assessment

According to Rahayu (1998, p. 1), there are 7 types of panels known in organoleptic assessment, namely individual panels, limited panels, trained panels, rather trained panels, untrained panels, consumer panels and children's panels.

### a. Individual Panel

The individual panel is a highly skilled person with very high specific sensitivity obtained because of talent or very intensive training. The individual panel is very familiar with the nature, role by means of processing the material to be assessed and mastering the methods of organoleptic analysis very well. The decision is entirely on someone.

### b. Limited Panels

The limited panel consists of 3-5 people who have high sensitivity so that it can be more avoided. The panelists were familiar with the factors in organoleptic assessment and knew how to process and influence raw materials on the final results. Decisions are taken after discussion among the members.

### c. Trained Panel

The trained panel consists of 15-25 people who have good sensitivity. To become a trained panelist needs to be preceded by selection and exercises. This panelist can assess several stimuli so that they are not too specific. The decision is taken after the data is analyzed statistically.

### d. The Panel Is Somewhat Trained

A somewhat trained panel consists of 15-25 people who were previously trained to know certain sensory properties. A somewhat trained panel can be chosen from a limited circle with sensitivity first. While data that is very distorted may not be used for analysis.

### e. Untrained Panel

The untrained panel consists of 25 lay people who can be chosen based on

ethnicity, social level and education level. An untrained panel is only allowed to assess simple organoleptic properties such as preference traits, but may not be used in differentiation tests. For this reason, an untrained panel usually consists of adults with male panelists and female panelists.

### f. Consumer Panel

The consumer panel consists of 30 to 100 people who depend on the commodity marketing target. This panel has a very general nature and can be determined based on specific individuals or groups.

### g. Children Panel

A typical panel is a panel that uses children aged 3-10 years. Usually children are used as panelists in the assessment of food products that are preferred by children such as chocolate, candy, ice cream, and so on.

## 2.7. Packaging

In Dewi (2013, p. 42) said, sometimes consumers think packaging will affect the price increase of an item being sold. So producers have to introduce to consumers "white goods" (white goods), which are goods that have very minimum packaging (but the material is still safe to use), but in essence the packaging activity will still be a factor that must be taken into account in product design. Packaging / packaging aims to protect the goods or products, provide convenience when used, and is used for the purposes of selling the goods or products.

## 2.8. Marketing Research

According to Rangkuti (2007, p. 1) said, marketing research or marketing is research activities in marketing that are carried out systematically starting from the formulation of the problem, research objectives, data collection, data processing and interpretation of research results.

The results of this marketing research can be used to formulate marketing strategies in seizing market opportunities. The purpose of systematic action, is an

action that is carried out regularly and consistently, based on scientific activities that can be proven.

### 3. Materials and Methods

The research method used is a quantitative approach, because this type of research is experimental research and sensory testing that is physical / appearance, color, taste, aroma, and texture to produce the best formulation. As well as testing the consumer's acceptance of the innovation of the Sanjai Rendang spice cracker product. The trick is to test between the original product and the new product, and then the consumer acceptance of the new product will be tested.

For research subjects using 15 trained / expert panelists in the field of food, and 60 for unskilled panelists as a test of consumer acceptance. Organoleptic parameters test on taste, color, aroma, shape and texture in this study were expert panelists who did not experience interference in determining the taste of food.

## 4. Results and Discussion

### 4.1. Overview of Research Objects

For the object in this study a comparative test of Sanjai cracker products with balado and rendang seasoning. Where sanjai cracker products are carried out three kinds of concentration treatments on rendang seasoning for stage I, namely organoleptic testing which will be assessed by 15 trained panelists in various places whose criteria are chefs, entrepreneurs / private sector, lecturers in the culinary field, and students. The assessment that must be given is to cover color, taste, texture, aroma, and shape. After finding one of the best formulations that will be compared with Karupuak Sanjai Balado products as control products. This is stage II, which is a hedonic test or a favorite test of 15 trained panelists, the assessment given is the same as the Phase I test. Furthermore, the best Sanjai

seasoning cracker products will be tested in Phase III, namely the acceptance of consumers to non-Minang and Minang communities enrolled at the Indonesian University of Education.

### 4.2. Panelist Characteristics

#### 4.2.1. Gender

No	Gender	Frequency (person)	Percentage %
1	Male	5	33,33
2	Female	10	66,67
	Total	15	100

#### 4.2.2. Type of Panelist Work

No	Type of work	Frequency (person)	Percentage %
1	College student	6	40
2	Chef	3	20
3	Lecturer	2	13,33
4	Businessman / private	4	26,67
	Total	15	100

### 4.3. Organoleptic Characteristics

The test results from the hedonic test data, Analysis of Variants (ANAVA) and continued by searching for Least Significant Difference and continued with turkey's-b test with a confidence interval of 95% or 0.05, resulting in the selected color characteristic is KSBR3 with a yield of 6.60 with a concentration seasoning rendang 40 grams. for the taste preference KSBR3 coded 40 grams. for the favorite aroma coded KSBR3 which is 6.13 with a concentration of rendang 40 grams. for the preference of texture coded KSBR2 and KSBR3 which is 6.33 with a concentration of 30 grams of rendang and 40 grams. for the highest product appearance preference, the KSBR3 code is 6.33 with a concentration of 40 grams of rendang seasoning.

#### 4.4. Quality Assessment Characteristics of Karupuak Sanjai Bumbu Rendang

Deployment testing to consumers based on physical parameters that answer well as many as 33 respondents with a percentage of 55%. based on the parameters of taste that answers delicious as many as 36 respondents with a percentage of 60%. based on the texture parameters that answer crispy as many as 30 respondents with a percentage of 50%. based on the color parameters that answer interestingly as many as 34 respondents with a percentage of 56.67%. based on the aroma parameters that answer the typical that is as many as 33 respondents with a percentage of 55%.

#### 4.5. Nutrition Analysis Based on List of Food Composition

The results for the nutritional content of the sanjai crackers in rendang seasonings per portion are energy of 0.32 cal, water of 0.052 gr, protein 0.0049 gr, fat 0.028 gr, carbohydrate 0.0093 gr, phosphorus 0.054 mg, minerals 0.00108 gr, calcium 0.018 gr, and iron 0.0015 gr. It can be concluded that the nutritional analysis of nutritional treatment products is greater than the control products.

#### 4.6. Discussion

The following discussion is related to the innovation research of Sanjai Rendang spice cracker products, namely regarding:

- a. Stages of the process of making sanjai crackers:

The main raw material of sanjai crackers is cassava. Cassava is used as much as 1000 grams. Cassava is obtained from the Gegerkalong market close to the research site, because this raw material is easy to find. The results of this sanjai crackers are crispy and golden brown. Following is the process of making sanjai crackers:

- 1) Cassava stripping
- 2) Cassava cleaning
- 3) Cassava dressing

- 4) Furthermore, soaking cassava with salt water for 2 minutes
- 5) Then cassava is fried in oil that has been preheated. Cassava is fried for 7 minutes.

- b. The stages of the rendang manufacturing process:

To make rendang requires a lot of raw materials in the manufacturing process. And to make rendang requires quite a long time for 3 hours. The following is the process of making rendang:

- 1) Cleaning of all raw materials
- 2) Finely chopped meat
- 3) After that coconut milk and spices that have been mashed before, put it in the pan. Light the fire and stir well.
- 4) After that enter the lemongrass and leaves, while stirring. Stir until the coconut milk releases oil.
- 5) Then add the spices and chopped meat. Stir well.
- 6) Stir in the rendang until the coconut milk is dry and oily.

The following is the standard recipe for Sanjai crackers with rendang seasoning:

*Rendang :*

Ingredients	Quantity
Tenderloin meat	1 kg
Red chili	300 gr
Garlic	20 gr
Galangal	100 gr
Turmeric leaves	1 piece
Lemongrass	1 piece
Star anise	2 gr
Nutmeg	2 gr
Cinnamon	20 gr
White pepper	2 gr
Thick coconut milk	3 ltr
Shallot	150 gr
Ginger	15 gr
Bay leaf	2 pcs
Lime leaves	3 pcs
Clove	40 gr
Cardamom	3 gr
Coriander	20 gr
Salt	2 gr



Kerupuk Sanjai :	
Ingredients	Quantity
Cassava	1 kg
Oil	1 ltr
Salt	25 gr

- c. Stage I, Ranjang sanjai cracker products will be tested organoleptically (ANAVA) with three concentrations of rendang, each treatment is coded KSBR1 with 20 gram rendnag spices, KSBR2 with 30 grams rendang spices, KSBR3 with 40 rendang spices gram. From these tests the highest results were found in the KSBR3 code, which the average value of the color parameter was 6.60, the flavor parameter was 6.27, the aroma parameter was 6.13, the texture parameter was 6.33, and the product appearance parameter was 5.87. The number of panelists trained in this organoleptic test was 15 people.
- d. Phase II, testing of the hedonic test (Turkey test / T-test) which tested two products on 15 trained panelists namely the Sanjai Rendang spice cracker product as a treatment product and Balanj Sanjai cracker as a control product. In this test the treatment products to be tested are KSBR3 codes. With an average value of the following parameters the color is 5.80, the taste is 6.33, the aroma is 6.07, the texture is 6.07, and the appearance of the product is 6.67.
- e. Phase III, the acceptance of product consumers to 60 consumers. In this consumer test the respondent must assess the quality of the product such as color, taste, aroma, texture and physical appearance of the Sanjai Rendang spice cracker product. The physical parameters of the highest number of alternative answers are those who answered that good physical characteristics were 33 people (55%). The parameter of taste the highest

number of alternative answers is that which holds 36 characters (60%) good taste characteristics. The highest number of alternative texture parameters is the one that crispy answers as many as 30 people (50%). The color parameter of the highest number of alternative answers is the one who answers that the characteristic color is 34 people (56.7%). The most number of alternative aroma parameters answers is that answered that the characteristic aroma of 33 people (55%).

- f. From the DKBM nutritional calculation, dbbm results obtained from the content of sanjai crackers serving 100 grams of weight, 0.13 kcal of energy, 0.012 grams of fat, 0.26 grams of protein, and carbohydrate content of 0.006 gr. For DKBM, the content per 1 serving of rendang spices weighing 40 grams, energy 0.19 kcal, fat 0.0016 gr, protein 0.0045 gr, and carbohydrate content 0.0033 gr.
- g. Packaging

The packaging chosen for use is packaging made of thick mica shaped jars. The size of the jar is chosen with a diameter of 8 cm and a height of 16 cm, with a screw-on cap slosures lid material that is a lid that has a thread on the part that functions to lock the lid with the thread finish.

## 5. Conclusions

From the results of studies and discussions that have been conducted regarding the analysis of product innovation and the feasibility of the Sanjai Rendang spice crackers business, the conclusions can be drawn as follows:

- a. The selected rendang seasoning concentrate is 40 grams in weight. For one recipe rendang with a net weight after cooking is 1,800 grams can produce 45 servings / 40 grams. While for one recipe, the sanjai cracker with a net weight after cooking is 800 grams

can produce 8 servings / 100 grams. For the spicy taste of rendang can be adjusted according to each taste.

- b. Based on the results of consumer acceptance testing, the response from consumers is very positive about this new product innovation. Consumers assess the taste of the sanjai cracker products as a delicious rendang spice, because the taste of the rendang is mixed with sanjai crackers when it is on the tongue. Consumers also find the color of this product interesting, because rendang itself is dark brown and not black like rendang in general. For the crisp texture of the Sanjai Rendang spices crackers, consumers judge the crispy sanjai crackers. The aroma in sanjai crackers is considered by consumers to have a distinctive aroma, because Rendang uses a lot of herbs and spices. From the physical appearance of the sanjai crackers, the rendang seasoning is rated by consumers as good. Consumers are very enthusiastic about this new product innovation.

### 5.1. Suggestions

Based on the results of research that has been done, there are a number of suggestions for sanjai spice cracker products, namely:

- 1) Sanjai cracker raw material can be used as raw material for food product innovation. Cassava is a local food ingredient, this means it can reduce the use of imported raw materials (flour) and can increase the use of local food ingredients.
- 2) In order for the rendang seasoning to be used to be more consistent in color characteristics, use raw materials with good quality so that the taste, color, aroma remain consistent.
- 3) Increase the promotion activities of Sanjai Rendang spice cracker products so that they are better known by the wider community.
- 4) The packaging used is very creative but affects the selling price which is higher than the price of existing sanjai crackers such as Balado sanjai crackers with plastic packaging.
- 5) If the price of the packaging greatly influences the selling price, it would be better to consider using a jar again. Able to use plastic packaging that is more unique than existing.

### 6. References

- Adam, E. E. & Ebert, R. J. (1992). *Production and Operation Management; Concept, Models and Behavior* (5th Edition). Prentice Hall.
- Dewi, R. N. I. (2013). *Study of Glutinous Tape Flour Concentration in Glutinous Tape Brownies and Their Variations on Consumer Acceptance in Kuningan City*. (Thesis). Bandung Indonesian Education University.
- Marsum, W. A. (2005). *Restaurant and all its problems*. Yogyakarta: Andi
- Rahayu, W.P. 1998. *Guidance Guidelines for Organoleptic Assessment Practicum*. Bogor Agricultural Technology Faculty. Bogor Agricultural Institute. Bogor.
- Rangkuti, F. (2007). *Marketing Research*. Jakarta: PT. Gramedia Main Library.
- Rumayar, C.H. (2011). *Food processing handouts (food knowledge)*. Bandung: Not published.
- Setyaningsih, D., Apriyanto, A., & Sari, M. P. (2010). *Sensory analysis for the food and agro industry*. Bogor: IPB Press.
- Suri Andam, R. (2012). *Rendang traveler*. Jakarta: Terrant ink.
- Sosrosoedirdjo, R. S. (1992). *Cassava*. Bogor: CV. Yasaguna.
- Tjiptono, F. (2008). *Strategic Marketing*. Yogyakarta: Andi