

Product Innovation through Chip Making Training Bidara Leaves to Improve The Community's Economy Buhudaa Village, Gorontalo Province

Hapsawati Taan^a & Herinda Mardin^b

^aDepartment of Management, Faculty of Economics and Business, Universitas Negeri Gorontalo, Jl. Jend. Sudirman No.6, Dulalowo Timur, Kota Tengah District, Gorontalo City, 96128, Indonesia

^bDepartment of Biology, Faculty of Mathematics and Natural Science, Universitas Negeri Gorontalo, Jl. Prof. Ing. B. J. Habibie, Tilongkabila, Bone Bolango, 96554, Indonesia

Abstract

Innovation products are able to help the economy and provide knowledge to the community or village residents. Especially how to package a product to make it more attractive. With KKN, students are expected to be able to become an active, creative and innovative part of society, involved in the dynamics that occur in society. The activities carried out were Leaf Bidara UMKM Product Innovation and Product Packaging for the Community in Buhudaa Village, Batudaa Beach District, Gorontalo Regency. The methods in this activity are training and demonstration. The form of training is by providing material related to how to make bidara leaf chips and participants are trained to make bidara leaf chips. There were 15 participants who took part in this activity who were housewives and young people from Karang Taruna Buhudaa village. The activity was carried out on September 9 2024 at the Buhudaa village office hall, Batudaa Pantai District, Gorontalo Regency. The stages of this activity are the preparation stage, implementation stage, organoleptic test stage and evaluation stage. The training activity for making bidara leaf chips in Buhudaa village went smoothly and the activity participants were very enthusiastic during the activity process. Based on the results of organoleptic tests on the results of bidara leaf chips in training regarding aroma, taste, color and texture, they were very well received by the panelists.

Keywords: bidara leaves; buhudaa village; chips; innovation; training

1. Introduction

MSMEs are regulated in Law (UU) of the Republic of Indonesia Number 20 of 2008 concerning MSMEs. In chapter 1, article 1 of the law, it is stated that micro businesses are productive businesses owned by individuals and/or individual business entities that meet the criteria. Small businesses are productive economic businesses that stand alone, carried out by individuals or business entities that are not subsidiaries or branches of companies that are owned, controlled or become part, either directly or indirectly, of medium or large businesses that cater to small businesses. as intended in the Law. One of the industries in Indonesia that is currently developing rapidly is the culinary industry. The culinary industry is currently considered the fastest running industry because it tends to have small capital and is supported by people's relatively high purchasing power (Prasetyo, & Wijaya, 2019; Rahmi, 2021; Thio, 2024).

The culinary industry also covers a very broad market segmentation compared to other industries. Basically, food is everyone's need. Apart from that, the culinary business is the easiest business to innovate in its presentation. Marketing is a social and managerial process where individuals and groups obtain what they need and want by creating and exchanging products and services as well as value between one person and another. The aim of marketing is to attract new customers by creating a product that meets consumer desires, promising superior value, setting attractive prices, distributing products easily, promoting effectively and retaining existing customers while still adhering to the principle of customer satisfaction (Linardo, 2018; Tabroni, & Komarudin, 2021).

One effort that can be made to face increasingly high trade competition is through packaging design. Of all the activities that occur, the most influential factor is human sensing, because 80% is the performance of sensing through sight or the visible (Visual). So, the graphic elements of packaging include: color, shape, brand, illustration, letters and layout, becoming a crucial part of the visual elements which have the biggest role in the process of conveying messages visibly

* Corresponding author:

E-mail address: herindamardin@ung.ac.id (Herinda Mardin)

(Visual Communication) (Yusa, et. al., 2023; Yasa, et al., 2024). The attractiveness of a product cannot be separated from its packaging. Because it is a "trigger" that directly deals with consumers. For this reason, packaging must be able to influence consumers to give a positive response. Packaging in the Big Indonesian Dictionary (2000) means the result of packaging/protecting merchandise.

Packaging is science, art and technology which aims to protect a product when it is sent, stored or sold or it could also be a production process which aims to package. According to Danger (1992) Packaging is the design and manufacture of packaging intended for retail goods. However, it can be interpreted broadly, namely that it is a complex subject and has become an important part of the promotion of any product. Packaging is simply defined as a way to convey goods to consumers in the best and most profitable condition.

In the current era of globalization, packaging has a very important role because it will always be related to the commodity being packaged and is also the selling value and image of the product (Zen, et. al., 2017; Mashadi, & Munawar, 2021). The packaging sticker is designed with a yellow background which has a bright color philosophy so that it can arouse consumers' appetite. At the top there is a tagline which is a short and simple sentence that is able to describe the product that will be sold. The tagline function itself is included in the concept of creative marketing and product branding. In the center section there is a product name, namely *Zizipus mauritiana*, which comes from the Latin name for Bidara leaves, and the name "Crispy Bidara" is also added according to the product produced. As a sweetener, a picture of a green bidara leaf is also added and at the left end of the sticker there is a composition used when making crispy bidara leaves.

For the people in Buhudaa village, Bidara leaves are only used as ornamental plants in people's yards, even though there are health benefits of Bidara leaves such as lowering blood sugar levels to prevent diabetes, drying scars quickly, reducing fever, preventing the growth of cancer cells and tumors, improving blood flow, blood, and increases appetite (Siregar, 2020; Indrayani, 2024). Bidara leaves can also be used as culinary valuables to improve the community's economy. For this reason, we are holding a program on Product Innovation so that we can learn more in the era of social media, especially regarding design for packaging. Based on these problems, there is a need for outreach and training efforts regarding the manufacture of bidara leaf chips and packaging design and production of crispy bidara leaves.

2. Methods

The methods in this activity are training and demonstration. The form of training is by providing material related to how to make bidara leaf chips and participants are trained to make bidara leaf chips. There were 15 participants who took part in this activity who were housewives and young people from the Karang Taruna Buhudaa village. The activity was carried out on September 9, 2024 at the Buhudaa village office hall, Batudaa Pantai District, Gorontalo Regency.

The activity procedures are as follows:

- a. Preparation stage, this stage starts from coordinating with the local government and community. Students prepare invitations to local communities who are participants in training activities, community leaders and youth organizations as well as invitations to resource persons. Apart from that, students also prepared tools and materials to make bidara leaf chips as well as activity locations. Equipment prepared for activities such as sound systems and LCDs as well as banners and materials during training.
- b. Implementation stage, at this stage material is provided regarding the characteristics and benefits of bidara leaves as well as a demonstration of making bidara leaf chips directly at the activity location. Participants are directly involved in making Bidara leaf chips, namely mixing the ingredients and frying the Bidara leaf chips.
- c. Organoleptic test stage, this organoleptic test stage is related to the taste, aroma, texture and color of bidara leaf chips whose respondents were participants who were present during the activity. Each assessment aspect consists of 6 criteria, namely strongly dislike, somewhat dislike, somewhat like, like, like very much, like very much. Panelists/respondents are participants who were present when the activity took place.
- d. Evaluation stage, at this stage, the moderator asks the participants present regarding the implementation of the activity.

The following is an overview of the procedures for implementing training activities for making bidara leaf chips in Buhudaa village, Batudaa Pantai District, Gorontalo Regency, presented in Figure 1.

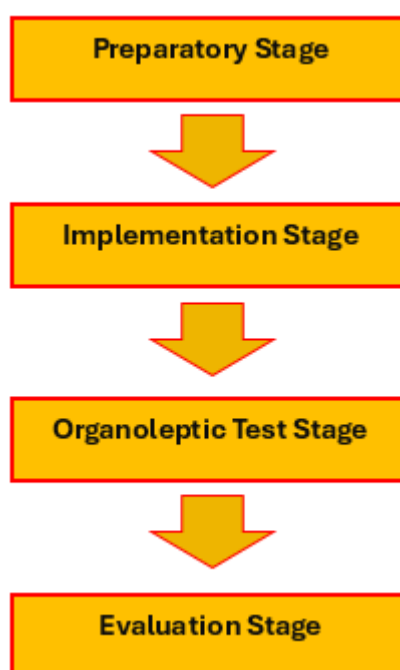


Figure 1. Activity Procedures

3. Result and Discussion

Bidara plants in Buhudaa village are used as ornamental plants planted in the front and back yards of houses. The lack of insight regarding the benefits of bidara leaves for health and economic benefits means that the use of bidara leaves in Buhudaa village is less than optimal. Bidara leaves can be a culinary preparation with economic value that requires innovation, production quality and packaging. For this reason, there is an idea of innovation by building a business through products that can have economic value, but in building a business you need to pay attention to several things so that the products produced for consumers can be well received and attract many enthusiasts. Such as determining the product you want to sell, having packaging that attracts consumers. The program implemented is in the form of innovation by using bidara leaves as the main ingredient in making products, namely by making chips from bidara leaves and of course there are many benefits from consuming these leaves.

Based on the conditions of the partner communities in Buhudaa village, Batudaa Beach District, Gorontalo Regency, namely 1) Processing of bidara leaves into MSME culinary products with economic value in Buhudaa village has not been carried out; 2) The level of public knowledge about the health benefits and techniques for processing bidara leaves into culinary products for MSMEs is still lacking; 3) The level of knowledge of the people of Buhudaa village, Batudaa Pantai District, Gorontalo Regency regarding product packaging that has sales value and product image is still lacking. Through this training activity, we provide understanding to the people of Buhudaa village regarding the benefits of bidara leaves for health, techniques for processing bidara leaves into culinary products, namely chips, packaging of products with economic value. The following description of the training is presented in Figure 2.

The first training session was carried out by providing material related to the materials and tools used in making bidara leaf chips. Providing material by resource persons using the lecture method. To make bidara leaf chips, the main ingredient used is fresh bidara leaves. These leaves are selected in good condition, free from damage, and washed thoroughly before processing. Apart from that, several other complementary ingredients include wheat flour and rice flour which are used to make the coating dough so that the chips have a crunchy texture. Eggs, salt and garlic (optional) are also added to give the dough a savory taste. Water is used to mix the flour and produce the right dough, while cooking oil functions as a medium for frying the chips until cooked and crispy. Apart from materials, you also need some simple tools. A large container or bowl is used to mix the flour mixture. A strainer or oil drainer is useful for draining chips after frying so they don't get too oily. A frying pan and spatula are needed to fry the bidara leaves evenly.

Don't forget the stove as a heat source and a cutting board and knife if the leaves need to be cut smaller. These tools are important to support the process of making bidara leaf chips efficiently and cleanly.



Figure 2. Activities to Make Bidara Leaf Chips

After providing the material to the participants, it was continued with a demonstration of making bidara leaf chips and organoleptic testing of the product by the respondents. There are 4 aspects assessed in the organoleptic test, namely aroma, taste, color and texture. The organoleptic test results from these four aspects are presented in Figure 3.

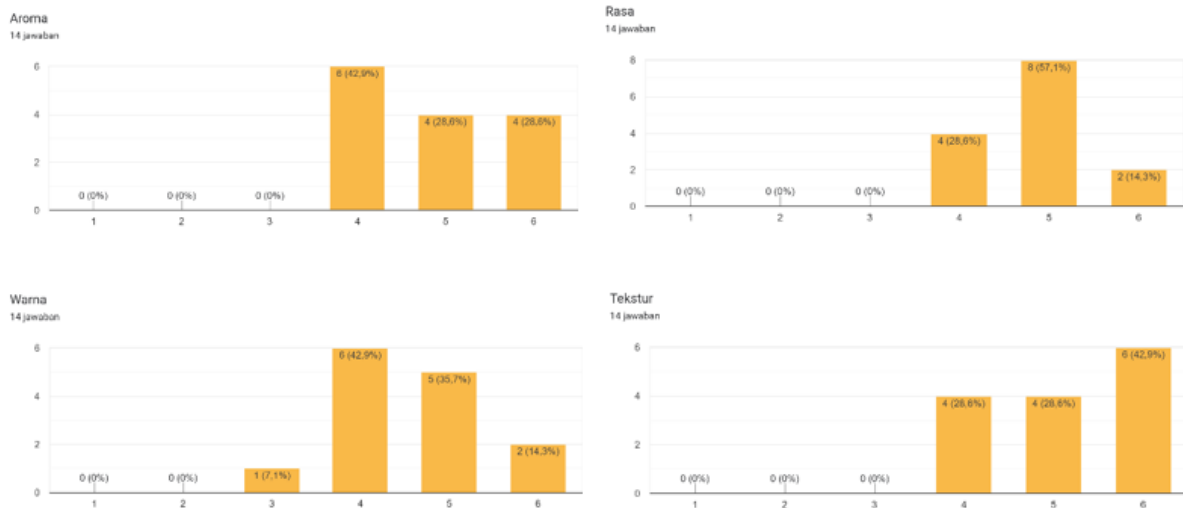


Figure 3. Organoleptic Test Results

Based on the organoleptic test results in Figure 3, it shows that the aroma of bidara leaf chips products can be accepted by panelists with the highest score of 42.9%, which means that panelists can accept the aroma of bidara leaf chips with the criteria of liking. The taste of the bidara leaf chips product was acceptable to the panelists with the highest score of 57.1%, which means the panelists were able to accept the taste of the bidara leaf chips with the criteria of really liking it. The color of the bidara leaf chips product was acceptable to the panelists with the highest score of 42.9%, meaning that the panelists were able to accept the color of the bidara leaf chips by approaching the very like criteria. Meanwhile, the texture of the bidara leaf chips product was accepted by the panelists with the highest score of 42.9%, meaning that the panelists were able to accept the texture of the bidara leaf chips with the criteria of really liking it.

The results of this organoleptic test show that the color of the bidara leaf chips has a value of 7.1% on the somewhat favorable criteria. This is because the color of the bidara leaf chips is adjusted to the preferences of KKN students who first carry out experiments to get the best results. However, it turned out that the panelists preferred brighter colors

closer to yellowish, so the input from the panelists was to add food coloring or turmeric to make the color of the bidara leaf chips more attractive and appetizing.

The final session of the activity involved giving bidara plant seeds to the training participants. It is hoped that these seeds will grow well in Buhudaa village and be used to make chips and other products of economic value. The bidara plant (*Ziziphus mauritiana*) is known as a plant that is resistant to extreme environmental conditions, such as drought. The leaves are small oval in shape with a smooth texture, bright green in color, and contain various active substances that are beneficial for health, such as antioxidants, flavonoids and anti-inflammatory compounds. Apart from that, this plant has sharp thorns and often grows in tropical and subtropical areas. The bidara plant is also often considered a plant of high spiritual value and is widely used in traditional healing practices in various cultures.

Apart from its physical characteristics, bidara leaves have various health benefits. The antioxidant content in bidara leaves can help fight free radicals, while the anti-inflammatory and antimicrobial properties in the leaves are useful for maintaining healthy skin and improving the immune system. In some traditions, bidara leaves are even used to treat digestive disorders, lower blood pressure, and relieve stress (Tazkiatulmilla, S. (2021). Therefore, the use of bidara leaves in products such as chips not only provides culinary value, but also potential benefits health.

The bidara leaf chips product is a food innovation that combines the savory and crunchy taste of chips with the natural properties of bidara leaves. These chips offer a healthy snack alternative because they not only taste delicious, but also contain beneficial nutrients. Apart from being a light snack that many people like, bidara leaf chips can also be a solution to increase consumption of herbal products in a way that is more attractive and easily accepted by various groups. An illustration of giving bidara plant seeds to training participants is shown in Figure 4.



Figure 4. Distribution of Bidara Plant Seeds

4. Conclusion

The conclusion of the training activity for making bidara leaf chips in Buhudaa village was that the activity ran smoothly and the activity participants were very enthusiastic during the activity process. Based on the results of organoleptic tests on the results of bidara leaf chips in training regarding aroma, taste, color and texture, they were very well received by the panelists.

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