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Development of Processed Products Made from Sweet Potatoes into Sweet Potato Milk (Violatte) to Improve the Economy of the Community in Dopang Village, West Lombok Regency

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Abstract: The potential of sweet potatoes in Dopang Village, West Lombok Regency is quite abundant, especially the type of purple sweet potato. In addition to its good health benefits, the existence of purple sweet potato also has high economic potential. Processing of purple sweet potatoes into more valuable products in Dopang Village is still considered lacking. Based on observations, the processing of purple sweet potatoes in the surrounding community is only in the form of snacks or chips. Therefore, this activity aims to develop processed products made from purple sweet potatoes into products in the form of sweet potato milk (Violatte) in the hope of increasing the economy of the local community. This activity is carried out in 4 (four) stages, namely; (1) product manufacturing experiment, (2) product improvement, (3) product socialization to the public, and (4) product marketing. The activity is carried out for approximately 1.5 months from November 22, 2021 - January 6, 2022. The location of the activity is in Dopang Tengah Hamlet, Dopang Village, Gunungsari, West Lombok, West Nusa Tenggara (NTB). Each stage of this activity, starting from product manufacturing trials, product improvement stages, socialization stages and product marketing stages has been carried out and is running well.

Keywords: Purple sweet potato; Sweet potato milk; Improve the Community Economy; Dopang Village

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Introduction

Indonesia is one of the countries with abundant local food production. One of the local ingredients that can be used is sweet potato in various varieties. Sweet potato is a plant that grows in the soil and produces tubers that can increase the potential use of local food ingredients. The tubers produced can be white, yellow, orange, red, and violet (Rachmawati, 2021).

Sweet potato (Ipomoea batatas (L.) Lamb) is a type of tuber that is consumed by humans from the family Convolvulaceae. Sweet potato is the fourth largest carbohydrate source in Indonesia. Sweet potatoes contain vitamins, minerals, dietary fiber, and bioactive compounds and have a low glycemic index. Sweet

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potatoes contain around 16-24% starch and have been widely used for the production of glucose and high-fructose syrup (Shitophyta, 2020).

Sweet potato has enormous potential when used as an alternative food option because it has health benefits and high economic potential (Rosyidah, & Mulyatiningsih, 2007). For example, purple sweet potatoes contain anthocyanins which are useful as antioxidants, and antihypertensives, and prevent liver disorders. Purple sweet potato can be anti-cancer because it contains active substances called selenium and iodine which are 20 times higher than other types of sweet potatoes. Purple sweet potato has a fairly thick flesh color due to the content of anthocyanin pigments that are spread from the skin to the flesh of the sweet potato (Rosidah, 2014). Purple sweet potatoes have a taste that is not too sweet, the content of anthocyanin pigments is higher than other sources such as purple cabbage, blueberries, and red corn compared to other sweet potatoes (Handayani, 2021).

One of the villages that has great potential in processing sweet potato raw materials, especially purple sweet potatoes, is in Gunungsari District, namely Dopang Village. The purple sweet potatoes in Dopang Village are mostly processed in the form of snacks. There are 4 production houses in Dopang Village, the production houses produce snack products such as cassava chips Balado, bananas chips, dumplings, peanut onions, macaroni Balado, crackers, and various other snacks. The marketing of these various snack products has reached outside the Lombok area such as Sumbawa and Bima so it can be said that these various snack products have been successful without any major problems for the last 10 years. Even during the Covid-19 pandemic, they are still operating and getting snack orders. However, over time innovations can be made to increase the selling value of products in Dopang village. Based on this, the author wants to make an innovation in the form of a drink to increase the variety of products that are processed from purple sweet potato.

Method

This activity is one of the Real Work Lecture (KKN) work programs by students of the Faculty of Teacher Training and Education (FKIP) Mataram University. The location of the activity is in Dopang Tengah Hamlet, Dopang Village, Gunungsari, West Lombok, West Nusa Tenggara (NTB). The activity is carried out for 1.5 months starting from November 22, 2021-January 6, 2022.

In general, this activity is carried out in 4 (four) stages, namely; (1) product manufacturing experiment, (2) product improvement, (3) product socialization, and (4) product marketing.

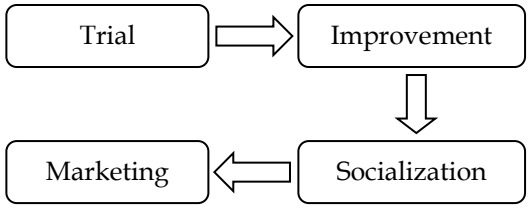

Figure 1. Stages of activities

Produk Product Manufacturing Trial

Activities at this stage are experimenting with making products and testing the resistance of purple sweet potato milk products. Experiments in making the product were carried out with several processes including peeling, washing, boiling, mashing purple sweet potatoes, and adding ingredients such as full cream milk, coconut milk, sugar, and water. Then the flavor variant, it is made by adding chocolate and sugar products into the original variant. This product durability test aims to find out how long the product can be stored in the refrigerator and at room temperature. The trial activity for making this product was carried out on November 22-27, 2021.

Product improvement

The form of activity at this stage is refining the product according to the results of the trial in the first stage. Then the next activity is determining the name, logo design, and product packaging. This aims to make the product more valuable in terms of quality or selling value. This product improvement activity was carried out on 27 November -14 December 2021.

Socialization

Activities at this stage are socialization of products that have been developed to the community by coordinating with local village officials. The series of activities at the socialization stage are generally divided into two, namely; (1) the presentation stage of the material, and (2) the practical stage of making purple sweet potato milk. The presentation stage is filled with introducing purple sweet potato milk products to the community starting from the background and regional potential, the purpose of making the product, the content and benefits of the product, packaging techniques, marketing techniques, and profit.

After the presentation activity was completed, the socialization activity was continued with training on making sweet potato milk by direct practice with the training participants. To make it easier for the community to practice making sweet potato milk, each participant was given a guide or instructions for making sweet potato milk products. In addition, the provision of instructions for making sweet potato milk aims to make

it easier for participants to socialize if they want to try making sweet potato milk at home independently.

Marketing

After the product developed is socialized to the public, the last step is product marketing. Marketing is an activity carried out to introduce products more broadly and not only limited to the Dopang Village community. Marketing is carried out from 2-6 January 2021.

Result and Discussion

Processed sweet potato milk is an innovation from processed sweet potato which is developed into a healthy and refreshing drink. By managing it into sweet potato milk, the variant of sweet potato is not only a snack or chips but can also be a drink that can attract the general public. Sweet potatoes have a myriad of health benefits. Sweet potato milk also helps to refresh and make the stomach full but can help meet nutritional needs. Not only that, but sweet potatoes also have more natural sugar than potatoes with fewer calories. Other benefits include controlling blood sugar, controlling blood pressure, reducing the risk of cancer, boosting the immune system, improving digestive system health, and improving eye health. The many benefits resulting from this sweet potato can be an option for processing healthy Violatte yam milk.

Produk Product Manufacturing Trial

This activity was carried out as the first step in making products for the main program of Preneur Village in Dopang Village. This activity begins with a survey of market prices for tools and materials used in the manufacture of purple sweet potato milk products. The steps used in the experiment of making purple sweet potato milk are as follows: 1) Prepare the necessary ingredients such as (purple sweet potato, full cream milk, coconut milk, sugar, and water 2) Prepare production equipment such as (a knife, blender, basin, pan, spatula, batik cloth (filter). 3) Production stages include (Preparing tools and materials, peeling and cutting, boiling sweet potatoes, smoothing sweet potatoes using a blender, putting sweet potatoes into the pot and adding additional ingredients such as (sugar, full cream milk, salt, and fiber creme), cooking the sweet potatoes to a boil, filtering the sweet potato milk, then putting it into the packaging bottle.

The purple sweet potato milk product that has been put into a packaged bottle is then tested for durability. This endurance test was carried out in 2 treatments, namely stored in a cooler and stored at room temperature. The results of the resistance test in the refrigerator, namely, purple sweet potato milk only lasted for 3-4 days in a tightly closed condition, while the results of the endurance test at room temperature only lasted a day. In this case, the cause of sweet potato milk not lasting long at room temperature is the addition of coconut milk. Coconut milk is a food ingredient that oxidizes quickly when exposed to air, thus causing drinks with a mixture of coconut milk to quickly deteriorate (stale).

Product improvement

After experimenting with making purple sweet potato milk, the next step was to improve the product, namely replacing coconut milk with fiber creme which was aimed at making purple sweet potato milk more durable and tastier. Then the next activity is determining the name of the product which aims to make it easy for people to recognize the product being developed. The name of the purple sweet potato milk product is "Violatte" which is taken from the French word violette which means purple. The name of this product is then made in the form of a product logo whose appearance can be seen in the image below.

Figure 2. Product Logo

At this stage, the product packaging design is also carried out. It aims to make the product more attractive and have a better selling value. The product packaging design can be seen in the following image.

Figure 3. Purple Sweet Potato Milk Packaging Design

Socialization

The next step that needs to be done is to introduce the product to the public. The step used in the product introduction process is by way of socialization. The socialization activity that has been carried out is entitled Development of Processed Products Made from Purple Sweet Potatoes to Improve the Economy of the Community in Dopang Village, West Lombok. Held on Saturday, December 25, 2021, which was attended by 10 participants from PKK members and several people from production houses in Dopang Village. The things that were conveyed at this stage of socialization included the introduction of purple sweet potato milk products, regional potential, product development objectives, as well as exposure to the benefits and content of the product. In addition, the participants were also provided with information related to sales profit. It aims to tell the public how much profit they get from selling purple sweet potato milk products.

Figure 4. Product socialization

After the socialization activities in the form of presentations were completed, the socialization was continued with training activities for making sweet potato milk by direct practice with the training participants.

Figure 5. Product manufacturing training

To make it easier for the community to practice making sweet potato milk, each participant was given a guide or instructions for making sweet potato milk products. In addition, the provision of instructions for making sweet potato milk aims to make it easier for participants to socialize if they want to try making sweet potato milk at home independently.

Marketing

After the product developed is socialized to the public, the last step is product marketing. Marketing is an activity carried out to introduce products more broadly and not only limited to the Dopang Village community. Marketing is done online and offline. Online marketing is done by promoting through existing social media such as Instagram, WhatsApp and Facebook. While offline is done by selling directly during CFD (Car Free Day) activities at Udayana on Sundays.

Figure 6. Product marketing at Car Free Day

Conclusion

Processing of purple sweet potato into a more valuable product in Dopang village is still considered less than optimal. This can be seen from the use of purple sweet potatoes in Dopang Village only as chips. Therefore, in this activity, through an integrated Real Work Lecture (KKN) program conducted by FKIP Mataram University students, they made an innovation in the form of making processed products made from purple sweet potatoes into products in the form of sweet potato milk in the hope of increasing the economy of the local community. This activity is running according to the activity plan. This activity is still limited to making sweet potato milk products from purple sweet potatoes. Therefore, it seems that there are still many innovations that should be done to encourage the economy and the standard of living of the local community.

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