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Community Empowerment Through Training on Making Sago Biscuit in Gwinjaya Village, Bonggo District, Sarmy Regency, Papua Province

Tri Gunaedi [1], Lisye Iriana Zebua [2], Meinarni Asnawi [3], Tri Wiyono[4]
[1, 2,3,4] *Cenderawasih University*

ABSTRACT

Gwinjaya is a village in Bonggo District, developed from the SP4 (Settelement Unit) transmingration settlement land in Bonggo district. The people mainly make their living as farmers and mostly grow peanuts and cultivating sago flour which comes from the sago plant. The abundant harvest has not yet been processed into food which has a higher selling value and is more durable. Through training in making biscuits made from sago flour and peanuts as well as sugar and spices , it is hoped that new entreprenuers can be formed with biscuit sago commodities. Tha training was carried out by demonstrating biscuit making and continued with participants trying to make biscuits. The resulting product was then tested organaoleptically to determine the quality and preference of the biscuits produced compared to biscuits sago sold on the market. The results of the activities that have been carried out show that the mothers in the village Gwinjaya, which is part of the Gwinjaya Village-Owned Enterprices , has been able to make biscuits made from sago flour well. The results of organoleptic testing produced with three other biscuit products on the market, showing that the respondents expressed their liking for the products they produced as seen from taste, smell, aroma and color parameters.

Key words: Biscuits, Flour, Sago, Training

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[1]Corresponding Author: Tri Gunaedi, Biology Departement, Faculty of Matematics and Natural Sciences, Cenderawasih University, Kamp Waolker Street, Yabansai, Jayapura. Papua; Email: gunaeditri@yahoo.co.id

INTRODUCTION

Background

Regional development in Papua Province, especially in Sarmi Regency, has begun to appear since the placement of transmigrants from several areas on the islands of Java, Bali and Madura. The placement of transmigrants in Sarmi district is centered in Bonggo district with a total of 12 transmigrant Settlement Units. The new areas that have developed have now become villages/villages led by a village head. SP4 has now developed into Gwinjaya village. Geographical location of Bonggo district, Sarmi Regency at 2.41667°S 139.08333°E.

The livelihood of most of the population is farming of horticultural crops, chocolate and peanuts. When peanuts are harvested, the harvest is abundant so prices are cheap and if they are not sold the crop will be damaged. There is a need to diversify the peanut crop into other products that can increase sales value(Malik, 2012). Apart from farming, the village community and local residents cultivate the sago plant, one of the many plants endemic to the island of Papua, to make sago flour as a food source of carbohydrates(Gunaedi & Rahayu, 2022).

The existence of agricultural products in the form of sago flour and peanuts can be combined into food products that are long-lasting and have high nutritional value, of course the selling value is also higher. The food product in question is a biscuit which contains ingredients such as sago flour, peanuts, walnuts, eggs, sugar and spices. To make biscuits, people do not yet have the skills, they need training from personnel who are educated in making biscuits made from sago flour.

Through this training, problems that arise in the community regarding post-harvest handling of agricultural products in the form of peanuts can be resolved through diversification into food products in the form of biscuits made from sago flour and peanuts. After being trained, it is hoped that the cadres will become more skilled and be able to open new businesses in making biscuits.

State of the Arts

Sago flour is flour that is often used in making various foods and dishes, comes from the sago tree (*Metroxylon sago*) and is an endemic plant in Papua. The nutritional composition of sago flour contains 209 kilocalories of energy, 0.3 grams of protein, 51.6 grams of carbohydrates, 0.2 grams of fat, 27 grams of calcium, 13 milligrams of phosphorus and 0.6 milligrams of iron, apart from that in sago flour It also contains 0 IU of vitamin A, 0.01 milligrams of vitamin B1(Makmur, 2018). So it is very good as a food source of carbohydrates. Apart from being able to make sweet bread, it can also be made into biscuits. Biscuits are a practical food because they can be eaten at any time with good packaging and have a relatively long shelf life (Asriani et al., 2021).

Various variations of additions to sago flour biscuits include coconut oil dregs (blondo)(Tahir et al., 2018), tuna fish flour (Wodi & Rieuwpassa, 2017), pumpkin flour and koro flour (Wati et al., 2016), fish anchovies (N. Rahman & Naiu, 2021) and many more, giving rise to varied tastes. In this service activity, there will be a demonstration of making sago starch-based biscuits made from sago flour, peanuts, tofu seeds, cloves and cinnamon, the taste and aroma produced are different from biscuits that have

been made as previously explained. Peanuts used in making biscuits are a food ingredient that has a high protein content of 24,41%(Trianto et al., 2019). Meanwhile, canary seeds can function as an antioxidant (H. R. Rahman et al., 2019). Kacang kenari juga dapat menurunkan kolesterol sehingga aman bagi penderita penyakit jantung (Masyitah et al., 2007). In the organoleptic test, respondents' preference level for sago biscuits was higher than for biscuits made from wheat flour (Wati et al., 2016). Sago biscuits can also be used as a medium for the treatment process, with the addition of Fe tablets they can be used as a treatment for anemia sufferers (Maryono & Kristiandi, 2022). Sago biscuits also contain clove powder as an aroma enhancer and preservative (Tulungen, 2019), Apart from that, it also contains cinnamon powder as an antioxidant and aroma enhancer (Rachmawati et al., 2021).

Every area that has sago trees also has various diversification of food made from sago, for example in Manado, North Sulawesi, lime, dange and bagea are made (Tulungen, 2019)(Kaunang, 2019) and noodles can be made(Auliah, 2012), sago tomato sauce (Gunaedi Tri and Ramandey, 2021) and many others.

Community empowerment through training in making sago biscuits in Gwinjaya village, Bonggo district, Sarmi district, it is hoped that people who are members of village-owned business entity activity units can use native regional food ingredients in making sago biscuits as food, a commodity for business entities so that they can increase the level of welfare and income Gwinjaya community.

METHOD

The method of implementing the sago bisacuit making training service is carried out using varied methods, it is hoped that the community will not feel bored and bored. This method is a combination of lecture, discussion, demonstration, role playing (repeating material that has been demonstrated) and question and answer methods.

Materials and Tools Blender, gas stove, scales, frying pan, oven and tupperware Ingredients: 300 grams of sago flour, 100 grams of peanuts, 50 grams of walnut kernels, 2 chicken eggs, 200 grams granulated sugar, ½ teaspoon ground cloves, 1 teaspoon ground cinnamon, 100 ml, vegetable oil and ½ teaspoon baking soda

Procedure to make biscuits sago: Beat the sugar and chicken eggs until thick. Add baking soda, walnuts, vegetable oil, sago flour and peanuts while stirring. Add the cinnamon and cloves while stirring the mixture until it is soft and can be formed. Shape the dough into a round ball with a diameter of 2 centimeters, then press it until it is flat or 1 centimeter thick. Place on a baking sheet that has been smeared with butter, spacing them apart. Bake in the oven at ± 160^{o}C for 30 minutes. Remove and cool the biscuits, packaged and ready to be consumed.

Evaluation of this activity is seen from the level of mastery of the material and products produced. The level of mastery of the material is carried out by asking questions related to the material provided. Product evaluation as a result of the training was carried out using organoleptic tests on the participants to see their level of liking for taste, smell, aroma, texture, by administering a questionnaire with a Likert scale of liking levels with ratings of 6 like very much, 5 like very much, 4 like it, 3 like it somewhat. , 2 don't like it and 1 really doesn't like it. The samples tested were 4 types of sago biscuits with various compositions of ingredients used in the

manufacturing process. Sample A consists of sago flour, eggs, sugar, salt, cinnamon and walnuts; Sample B consists of sago flour, eggs, sugar, cinnamon, cloves, peanuts, walnuts, baking soda and vegetable oil; Sample C consists of sago flour, walnuts, garlic; Sample D consists of sago flour, walnuts and brown sugar.

RESULTS AND DISCUSSION

RESULTS

Community service activities in the form of community empowerment through training in making sago biscuits in Gwinjaya village, Bonggo district, Sarmi Regency, Papua Province took place on July 29 2023 starting with an opening containing remarks from the village head and head of the service team from Cenderawasih University and a group photo with the participants. training participants from the food business unit part of the Gwinjaya village business entity

After the opening ceremony, it was continued with the provision of training materials and practice in making sago biscuits by the participants guided by the instructor. The results of the activity were sago biscuits with the BAGEAKU product label which had been packaged in tupperware packaging in figure 1.

Figure 1. Explanation of the procedure for making sago biscuits, followed by making sago biscuits by the participants by weighing and roasting sago flour and adding clove powder, cinnamon and baking soda, stirring eggs with granulated sugar, chopping walnuts and peanuts and mixing with egg mixture. with sugar then mixed with sago flour. The dough that has become smooth is molded and baked in the oven at 160^{o}C for 30 minutes. The finished product is tasted and the taste is right and then packaged in a labeled container.

The sago biscuit products resulting from the training were tested organoleptically with taste, aroma, texture and color parameters compared with three types of sago biscuits sold on the market with different raw material compositions.
The sago biscuit products resulting from the training were tested organoleptically with taste, aroma, texture and color parameters compared with three types of sago biscuits sold on the market with different raw material compositions. The test scale uses a Likert scale with six categories, namely like very much (6), like very much (5), like it (4), don't like it (3), don't like it (2) and don't like it at all (1)

The results of the organoleptic test showed that respondents showed their preference for sago biscuits, the training product, as seen in Figure 2.

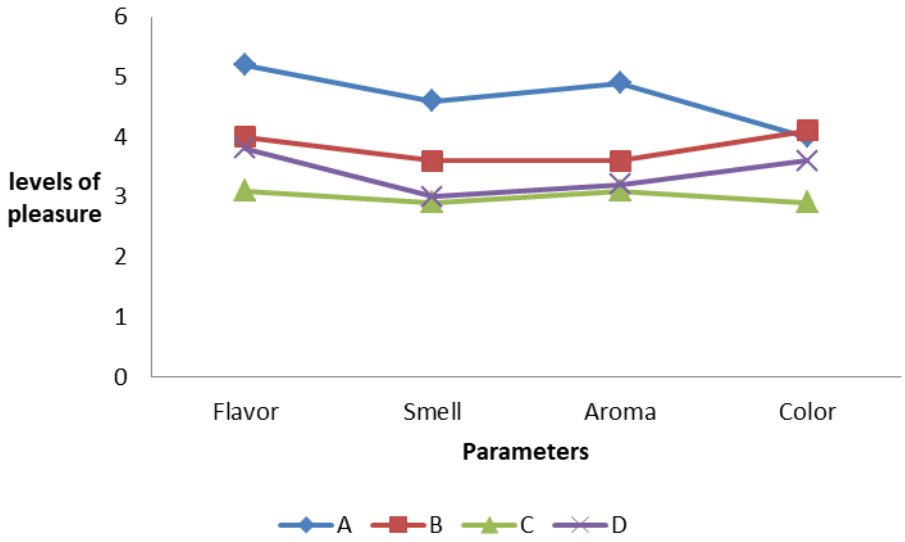

Figure 2. Organoleptic test results of sago biscuits from the training product compared with three sago biscuit products from the market

DISCUSSION

Community empowerment in Gwinjaya village, Bonggo district, Sarmi Regency, Papua Province through training in making sago biscuits, took place smoothly and well. This is due to the seriousness and perseverance of the participants in participating in the training. The enthusiasm of the participants was proven by their quick reception of training material information from the instructor and their skill in practicing again in making sago biscuits. This success is also supported by the availability of the main raw materials in the form of sago flour, peanuts and walnut kernels. Apart from that, there is cooperation between village stakeholders and non-governmental organizations involved in this activity.

The resulting product needs to be modified by adding various other nutritional food ingredients in the form of animal protein, for example fish from various types of fish in Papua. Sago biscuit products that have been modified with animal protein, for example anchovies (N. Rahman & Naiu, 2021), tuna fish (Wodi & Rieuwpassa, 2017). Apart from animal protein, you can also add vegetable protein, for example blondo flour (Tahir et al., 2018), yellow pumpkin and koro beans (Wati et al., 2016), red beans (Khairiah Rahayu, 2019) and with ginger extract (Asriani et al., 2021). Modifications to sago biscuit products are expected to increase the level of public liking, community income, and the variety of commodities offered by village-owned enterprises in their business units.

The results of organoleptic testing show that people like the product resulting from the training, although they do not really like it as much as product A. Judging from the composition of the ingredients, it is between A and B. Sample A consists of sago flour, eggs, sugar, salt, cinnamon and walnuts; Sample B consists of sago flour, eggs, sugar, cinnamon, cloves, peanuts, walnuts, baking soda and vegetable oil. The

presence of salt in product A and the absence of baking soda are the reasons respondents prefer it. The test parameters of color, taste, texture and aromas in the organoleptic test really determine the respondent's level of preference(Kiay, 2017). The color parameters in the sago biscuit test are influenced by the type of sago flour, namely brown and white (Maherawati et al., 2012) from various variants of the sago plant (Mustamu et al., 2021) thus affecting the color of the biscuit and the respondent's level of preference as well as the taste, texture and aroma depending on the composition of the ingredients used (Wati et al., 2016). The sago biscuits from the training contain cinnamon as an antioxidant and aroma enhancer (Rachmawati et al., 2021) Apart from that, it also lowers blood sugar levels (Rindy Cantika Istyawati et al., 2023). Another composition, namely the presence of clove powder in sago biscuits, is intended as an odor enhancer and food preservative because it can function as an antibacterial. (Safitri & Purnamawati, 2021). Respondents or the general public who are not familiar with these spices will show their dislike, while those who have tried them will give a favorable response, especially since the benefits of these two types of spices are very good for health.

CONCLUSION

Participants in the training on making sago biscuits can easily absorb knowledge in making sago biscuit products. The public liked the training product sago biscuits through organoleptic tests by comparing three types of sago biscuits available on the market with different compositions of the raw materials that make up the sago biscuits.

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[2]Corresponding Author: Tri Gunaedi, Biology Departement, Faculty of Matematics and Natural Sciences, Cenderawasih University, Kamp Waolker Street, Yabansai, Jayapura. Papua; Email: gunaeditri@yahoo.co.id