

Utilization of Mangosteen Skin Into A Halal Drink and Thayyib As A Business Opportunity In The Form Of Health Coffee Powder

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Abstract

This study aims to educate the public so that they can use mangosteen peel waste that has been consumed, so that it is not turned into useless waste, but can be used as a selling point that is beneficial for health and to help the creative economy for residents and SMEs in the hamlet. Ireng Daye, Jatisela Village, Gunungsari District, West Lombok Regency. The method used in this study was direct observation, with a validation test of the efficacy of mangosteen peel coffee, the type of qualitative research, while the data sources used were primary and secondary data, namely finding and collecting various information and records, books, journals that related to the object of research. The problem faced is the local community's lack of awareness of the benefits of mangosteen peel so that the mangosteen peel waste is not responded to properly, due to the lack of human resources and knowledge of the benefits of mangosteen peel. The results showed that instant KBM powder contained alpha-mangostin levels of 0.59 mg/g, anthocyanins 1.13 mg/g, and phenolic levels of 8.49 mg/g per unit weight of dry sample. the conclusion of this study (1) in order to be used as a herbal medicinal product is mangosteen rind. The most popular benefit is to overcome heart disease, cancer and other degenerative diseases. (2) in order to be useful as a business opportunity by various ways of packaging as original coffee powder drinks.

Keywords: Utilization, skin, mangosteen, coffee

1. Introduction

Indonesia is one of the tropical countries that produce the most mangosteen fruit in the world [1]. Mangosteen, which in Latin is known as *Garcinia mangostana* L. is a fruit plant in the form of a tree originating from shady tropical forests in Southeast Asia. Data from the Central Bureau of Statistics in 2011 mangosteen production in Indonesia reached 117,600 tons (BPS 2011). The large number of mangosteen fruit production will cause problems for the environment, especially those caused by mangosteen peels that are simply thrown away after the fruit is consumed [1]. Mangosteen fruit (*Garcinia mangostana* L) is a tropical fruit that has many advantages compared to other fruits. Mangosteen rind is the part of the mangosteen fruit that is generally considered useless and is the part of the skin that is often thrown away. Mangosteen rind chemically contains compound elements that can replace the function of chemical drugs to treat acne on the face. Chemical content contained in the skin of the fruit. mangosteen according to [2] namely xanthenes as

active chemical substances that are antioxidants. Antioxidants are useful for repairing damaged skin cells caused by free radicals. Lately, mangosteen peel extract is being popular as an alternative medicine. Because this dark purple fruit skin does have many benefits. Mangosteen peel contains anthocyanins which are beneficial for reducing the risk of cancer, diabetes, and cardiovascular disease. While the xanthenes in it are very high when compared to other fruits. This one powerful antioxidant to boost immunity. And dry mangosteen skin can be made into coffee which is very good for the body, both low caffeine coffee addicts and high caffeine coffee are recommended to replace their drinks or alternately with mangosteen skin coffee which is very good to consume twice a day in the morning and at night besides that with mangosteen peel coffee can also control excess cholesterol in the body. Most people in Jatisela village, Gunungsari sub-district, West Lombok district, are currently wasting mangosteen peel waste by directly throwing away the mangosteen rind that has been eaten. This behavior resulted in widespread organic pollution of waste pollution. Environmental

impact in the form of organic pollution of mangosteen peel waste, especially when the mangosteen fruit season has entered, the heaviest is in waters clogged with mangosteen peel waste, which is basically very difficult to damage. This is because the organic substance of this waste is slowly dissolved in wastewater, causing anaerobic conditions [3] The solution offered is a community capacity building program to produce an alternative product in the form of mangosteen peel powder into coffee as a food additive which functions as a creative innovation of assistance for housewives who want to open up business opportunities to improve the family economy so that there is additional income from business. which is part time and can be done in each household with diligent, consistent and sustainable capital.

The easiest method for processing mangosteen peel is to brew it as tea. Apart from being coffee, usually mangosteen skin that is processed like this is already dry. But in fact there are still many benefits that can be obtained from mangosteen peels. You can use fresh mangosteen peels as a mask for the skin to avoid acne and smooth the skin. Apart from that, the benefits of the mangosteen fruit are also very much no less important than the skin of the mangosteen fruit. Mangosteen fruit contains high enough calories and water content. Traditionally the mangosteen fruit can be used as a medicine for thrush, hemorrhoids and wounds. The fruit peel is used as a dye, including for textiles and the boiled water is used as a traditional medicine [4] Tree trunks are used as building materials, firewood/crafts. Table 1 shows the nutritional content of the mangosteen fruit (source AGROINDUSTRY & ENVIRONMENT - ppt download (slideplayer.info)). In order to increase the added value of mangosteen by-products, many techniques have been found to process mangosteen rind into useful products. Many research results prove that the high efficacy of mangosteen rind for humans. The results of the phytochemical screening test from mangosteen rind showed the presence of flavonoids, saponins, alkaloids, triterpenoids and polyphenols [5] it was also reported that KBM is a medicinal drink for health [6] Mangosteen peel is also anti-diabetic [7] and is rich in antioxidants such as xanthonenes and anthocyanins [8]. Aside from being a medicine, facial skin [9]

Tabel 1. Kandungan Gizi Buah Manggis per 100gr [10]

Content	Total
Calories	34,0mg
Water	83 gram.
Total amount of soluble	15-19%
Fat	0,6 gram.
Proteins	0,6 gram.
Carbohydrate	15,6 gram.
Fiber	1,5 gram.
Ash	0,2 gram.
Calcium	8 mg
Phosphorus	13.0 mg
Iron	1.0 mg
Sodium	7.0 mg
Potassium	45.0 mg
Vitamin B1	0,03 mg
Vitamin B2	0,03 mg
Niacin (Vitamin B3)	0,3 mg
Vitamin C	5 mg

2. Research Methods

The method used in this study is direct observation, with a validation test of the efficacy of mangosteen peel coffee, a type of qualitative research, while the data sources used are primary and secondary data, namely searching for and collecting various information and records, books, journals relating to the object of research. journal review approach. The journal review was carried out by obtaining data from five journal articles as a basis for compiling the results and discussions to be reviewed. The journal articles used include 5 accredited national journal articles, 5 national journal articles and online media articles as well as information from YouTube, and direct artisans or producers obtained from the field. The place.

The research was conducted in the main hamlet, Jatisela village, Gunungsari subdistrict, West Lombok district, West Nusa Tenggara. The time for the research started on October 1 – November 31 2022. The research being conducted was field research using a qualitative design so that researchers could observe the implementation of the process of making mangosteen rind coffee to its distribution process. as well as training on its manufacture to the process of testing the mangosteen peel coffee drink which was carried out at the Jatisela Gununugsari village office, West Lombok district. The nature of this research is descriptive because you want to know how to make the benefits of mangosteen peel and then describe the implementation of the manufacturing transaction to the mixed presentation method.

A. Population and Sample

The subjects in this study were coffee connoisseurs, especially a group of people who were present at the demonstration of making mangosteen peel coffee which was being demonstrated, while the objects studied were: (1) to find out the use of mangosteen peel for health coffee which is being carried out in Jatisela Village, District gunungsari, West Lombok district. and (2) to find out how to develop business ideas in order to gain knowledge with business opportunities from healthy halal drinks.

B. Data Mining Methods

Methods of data mining, in this study researchers will use data collection techniques both electronic media and other print media as well as direct observation of direct consumers of mangosteen rind coffee, interviews, and documentation. In observing the researcher uses non-participatory observation. Meanwhile, in the data collection procedure by interview, the researcher chooses to use structured interviews so that the researcher focuses on the data he wants to get. Especially in the sample in Jatisela village and regular customers of mangosteen peel coffee. Documentation, data obtained through the application of data collection methods that are relevant to conditions in the field

C. Data Checking Techniques

The data checking technique in this study uses the source triangulation technique. determining the sample using data collection techniques from several journals, theses, articles and information related to the benefits of mangosteen peel for making processed coffee that is halal and healthy, using interviews with users of processed mangosteen peel coffee products as well as secondary data in the form of documents. Triangulation of data sources is done by:

- 1) Do a comparison of the taste of regular coffee with mangosteen peel coffee and several coffees from other brands and ask for testimonials from those who feel the benefits of the processing of mangosteen peel coffee which is demonstrated in front of Jatisela villagers.
- 2) Data Analysis Method, in this research the data analysis technique includes a series of main activities, among others.
 - a). Outreach to local residents, and giving confidence to local residents in the form of testimonials to consumers who have experienced or consumed the properties and benefits of mangosteen rind coffee.
 - b). Prepare props and evidence from documentation that has consumed mangosteen rind coffee as well as research articles on the benefits of mangosteen rind coffee.
 - c). Training by way of manufacture to direct presentation to the surrounding community and then

finally learning how to pack properly if it is to increase household economic income.

3. Results and discussion

3.1. Results

what was achieved in this study as follows is shown in the diagram i below:

1. Provide training on activities in the village health program with residents and MSMEs of Jatisela village, Gunungsari sub-district, West Lombok district as the utilization of halal and toyyib drinks with the creative economy of the local community regarding the use of mangosteen rind and business opportunities.
2. It is hoped that every partner who takes part in the activity is expected to be active so that everything that is conveyed can be channeled properly
3. Direct demonstration conducted by the research team to partners on how to process and present the utilization of mangosteen rind as a drink of healthy coffee powder that is halal and toyyib
4. The participation of partners is expected to be able to play an active role so that they can apply the manufacturing process to explanation techniques to residents or other partners.

Figure 1. The flow of research activities from the results achieved by the technique of providing discussions in Sesele Village, Gunungsari District, West Lombok Regency.



Figure 2. The raw materials used to make coffee



Figure 3. Mangosteen skin coffee that has been produced is ready to be marketed for consumption.

3.2. Discussion

After carrying out counseling and discussion about the benefits of mangosteen rind which is produced into ground coffee from mangosteen rind, it is continued with the practice of making a drink from mangosteen rind. The whole mangosteen fruit is cleaned, then the fruit and skin are separated, then the mangosteen rind is dried. Furthermore, the dried mangosteen rind is mashed and ready to be consumed as a herbal health medicine, mangosteen rind powder without using any other coffee mixture. In carrying out this research, making halal drinks and toyyiban for human health on earth can also be used as a business opportunity for businesses that want to increase the family or household economy. It is recommended that this business idea has great potential and is also worth worship in this activity because it can help many people to maintain health with useful processed concoctions such as mangosteen rind coffee.

After holding socialization on how to make mangosteen rind coffee, the researchers tried to organize training on how to make it at the village office by involving elements of the local villagers and the Micro, Small and Medium Enterprises group in Ireng Lauq Hamlet, Jatisela Village, Gunungsari District, West Lombok Regency. With several samples from several coffee connoisseurs as trials and tasters so that from the testimony of connoisseurs and the benefits felt after consuming mangosteen peel coffee

which is the discussion in this study. After that socialization, training and education to the local community, then researchers review the results of the activities carried out so that the basic discussion can be obtained. So depicted in the diagram below:

The diagram for making halal drinks based on mangosteen rind can be seen in Figure 2 below;

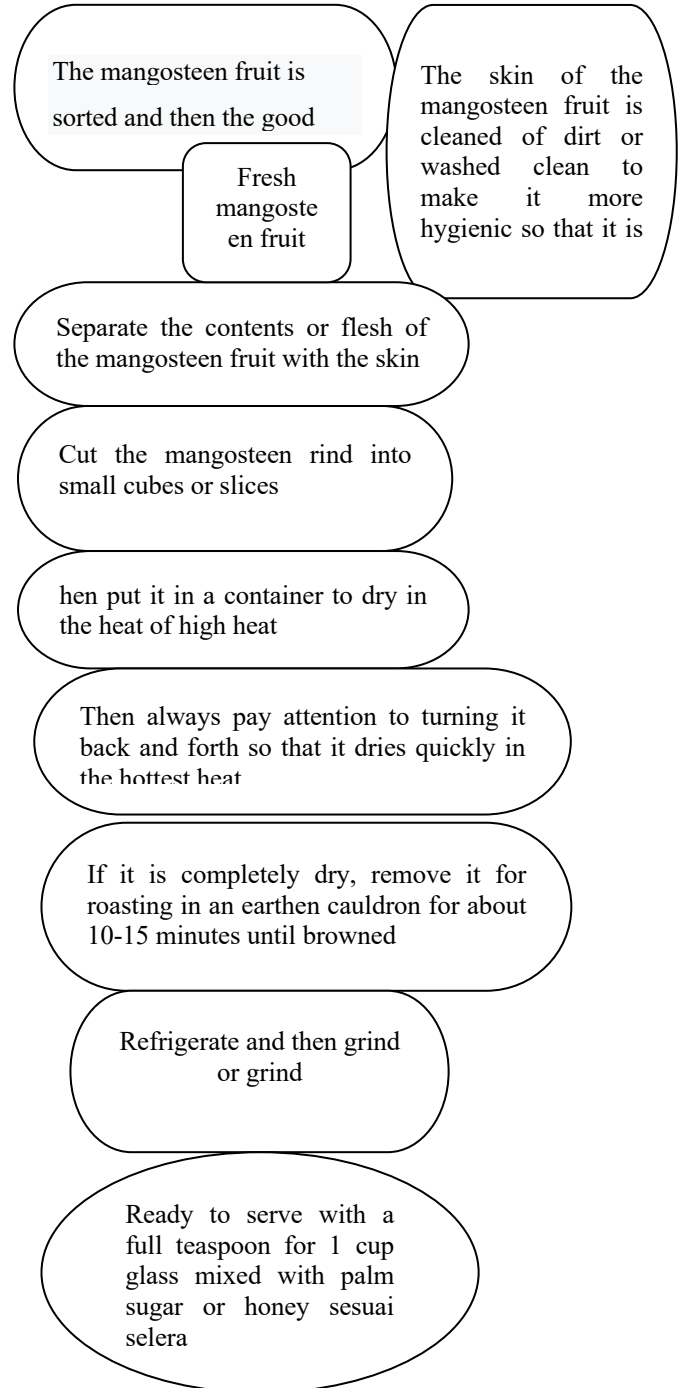


Figure 4. Diagram of Making Mangosteen Peel coffee powder

4. Conclusion

The final conclusions to be reached in this study include: Mangosteen fruit (*Garcinia mangostana*) is a fruit with advantages compared to other fruits. Not only the flesh, but the skin of the mangosteen fruit is very rich in substances that are beneficial to the body; such as active substances xanthone and anthocyanins which are antioxidants. The ability of xanthone antioxidants found in mangosteen rind is much higher compared to other fruits. Mangosteen fruit extract (*Garcinia mangostana* L.) has antioxidant activity using the DPPH method. [11] is a measure of the absorption power of the sample (extract) against DPPH free radicals. DPPH will react with hydrogen atoms from free radical scavenging compounds to form DPPH which is more stable. Compounds that act as antioxidants in mangosteen fruit extract (*Garcinia mangostana* L.) are alpha mangostin (xanthone) followed by phenolic compounds, anthocyanins, and tannins.

Maintaining the halal quality of health drink products (halal integrity) is one way to compete with other processed coffee products made from mangosteen rind. The quality of halal products can be improved through the MUI's role in issuing halal certification, namely by conducting research and continuous checking regarding new products and products that have been circulating for several years in the central halal culinary area. In addition to the MUI's role, there needs to be an understanding and role of the community as consumers which can influence consumer confidence and comfort in consuming halal coffee drinks with mangosteen rind which are sold in Jatisela village or in the UMMAT cooperative.

The weakness of research on writing is that it has not been able to ascertain which residents have been able to take advantage of the benefits of mangosteen peel coffee and who have experienced the benefits of consuming mangosteen peel coffee.

Recommendations for future research. It is hoped that future writers or researchers can complete more complete data, in developing this article more perfect.

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