
Utilization and Processing of Starfruit into Various Food Products in Watesari Village, Balongbendo District, Sidoarjo Regency

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Abstract. Starfruit is a fruit plant in the form of a tree originating from Malaysia, then spread widely to various other tropical countries including Indonesia. Sweet starfruit has various benefits for the health of the body. The content in star fruit can also be used for the prevention of diseases including getting rid of sore throat, cough, and fever, suppressing diabetic symptoms, also reducing high cholesterol. The processing of star fruit into various food products namely jam, ice cream, jelly candy, and pudding is carried out by the community service team of the Bachelor of Pharmacy Study Program, at Anwar Medika University. This utilization and processing are two of the tangible forms of improving the Watesari Village's economy. The activities include counselling, processing, and distribution of various food products from star fruit. The activities that were carried out received a positive response from the Village Headman and Watesari Village residents. The Watesari Village community was very enthusiastic when distributing various food products made from star fruit.

Keywords: star fruit cultivation, various food products, nutritious food

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INTRODUCTION

Starfruit is a fruit plant in the form of a tree originating from Malaysia, then spread widely to various other tropical countries including Indonesia. In general, starfruit can be planted in the yard of the house and can be used as a shade plant in the yard (Rukmana, 1996). Apart from being a fresh fruit food, star fruit can also be processed into nutritional products, because star fruit contains high levels of vitamin A and vitamin C, with a sugar content of 8% (Rukmana, 2006).

Sweet starfruit has various benefits for the health of the body. The content in star fruit can also be used for the prevention of diseases including getting rid of cough, fever, and sore throat, suppressing diabetic symptoms, also reducing high cholesterol, etc. (Mardiana, 2008). Star fruit has a distinctive taste and aroma, this is due to the eugenol compounds contained in star fruit. The taste of the fruit is determined by its ripeness. Ripe fruit on the tree will have a better taste, yellowish colour with a smooth and shiny skin surface. In contrast to ripe fruit, the colour of the fruit will be pale, and the surface of the fruit skin becomes wrinkled and lowering fruit quality (Sutrisno, 1991).

Watesari Village is one of the villages located in Balongbendo sub-district, Sidoarjo Regency, East Java. This village has potential in agriculture, namely star fruit, to optimize this potential, our community service was carried out by the Bachelor of Pharmacy Study Program at Anwar Medika University. It provides counselling regarding the benefits of star fruit and processing star fruit on various processed food products, that are nutritious and healthy.

PROBLEMS

Based on the results of a survey conducted by the community service team, the problems in Watesari Village, Balongbendo District are:

1. Star fruit was not optimally processed into food products.
2. The lack of public awareness about the benefits of star fruit.

METHOD OF IMPLEMENTATION

This Community Service activity was carried out by a Bachelor of Pharmacy Lecturer at Anwar Medika Hospital with the assistance of 10 Pharmacy Undergraduate Students. The target of this service is the Watesari Village Community, Balongbendo District, Sidoarjo Regency. This Community Service was carried out for a month in July –

August 2018. The implementation of the activity was carried out in several stages. The steps taken include:

- a. The first week conducted observations and data collection about the condition of Watesari Village.
- b. The second week prepared for service activities including making brochures and posters related to star fruit, making materials about the benefits and ways-of-processing star fruit into food products, and buying materials that are needed for star fruit processing.
- c. The third week provides counselling to the people of Watesari Village about the benefits of star fruit and provides independent training to the community on how to process star fruit into various food products.

RESULTS AND DISCUSSION

The theme in this community service is the Utilization and Processing of Starfruit into Various Food Products, where the food products of choice are making ice cream, jam, pudding, and jelly candy. The products made are named Bling-Bling ice cream, Bling-Bling jam, Bling-Bling pudding, and Bling-Bling jelly candy. The product name 'Bling-Bling' was chosen as the product name because of Indonesian phonetical similarity with the used main ingredient, which is star fruit. Besides that, star fruit is the forerunner of the flagship product of Watesari Village, Balongbendo District - Sidoarjo. Figure 1 shows outreach activities on the use of star fruit



Figure 1. Counselling on the benefits of star fruit and processing of star fruit into various food products

This work program is carried out by providing counselling and direct practice (demo) to residents of RW 03 Watesari Village who have been given invitations to each RT. This program aims to provide information about star fruit and its processing and aims to improve the economic conditions of the residents of Watesari. This program also aims to increase the selling value of star fruit which is a superior product of Watesari village. Figure 2 shows processing activities carried out with residents.



Figure 2. The star fruit processing into various food products

The first food product is star fruit ice cream. The ingredients used for making star fruit ice cream are quite easy, including star fruit, sugar, fresh milk, and vanilla. The first step is to choose a ripe star fruit because if it was ripe, it supposedly gives a sweet taste and soft texture too. Wash the selected star fruit, then slice the star fruit and separate it from the seeds. Puree the slices of star fruit with a blender, that were cleaned and have been separated from the seeds beforehand, and finally strain until fully extracted and the waste remains. Take only the extraction of star fruit and add it with other ingredients such as sugar, milk, and vanilla then stir until homogeneously mixed (you can just blend for 5 minutes), then place the dough into the freezer. Processed ice cream that has been frozen is ready to be served.

The second food product is star fruit jam. The ingredients used for making star fruit jam are also quite easy, including star fruit, fresh oranges, and sugar. The proportion for star fruit and oranges is 2:1 (if using 2-star-fruits, then only one orange is used). Wash the selected star fruit (choose a good and ripe one). Next, clean the edges of the star fruit skin, then slice the star fruit and separate it from the seeds, and puree using a blender. Squeeze

the orange and strain its water, put the blended star fruit and the orange juice in a saucepan, then add the sugar. Cook over medium heat, stirring gently until a thick mass forms. Let it cool and put it in a container. Figure 3 shows starfruits products namely star fruit ice cream, star fruit jam, and star fruit pudding.



Figure 3. The product of star fruit ice cream, star fruit jam, and star fruit pudding

The third food product is star fruit pudding as shown in Figure 3. The ingredients used include star fruit, water, plain jelly powder, and granulated sugar. Prepare a star-fruit, then cut it into small cubes. Prepare another star fruit, cut it into small pieces, then puree with a blender and take the juice. Put the star fruit juice, plain jelly powder, water, and granulated sugar into a saucepan. Cook over medium heat until the mixture boils. Place the small, cubed cut star fruit, in a container and then pour the boiling mixture into it. Wait until it cools and solidifies. Once it cools, then ready to be served.

The last food product we made was star fruit jelly candy. The ingredients were star fruit, agar-agar, water, and sugar. Wash the star fruit and then slice the star fruit and separate it from the seeds. Puree with a blender, squeeze it and take only the juice. Put star fruit juice, agar-agar, sugar, and water into a saucepan. Cook over medium heat, stirring gently until it boils. Pour into a bowl and wait until the dough hardens. If the dough has hardened, cut the dough into cubes or according to self-creation, then dry the diced pieces for 3-4 days until they produce a hard and chewy candy texture. Figure 4 shows a starfruit jelly product.



Figure 4. Process of Creating Organic Fertilizer

The response of the residents of Watesari Village to the outreach activities and demonstrations of making star fruit food products that have been carried out is quite good. They gave a lot of feedback after being given counselling and making demonstrations as well as testers for the processing results that had been provided, including ice cream, jam, and pudding. Many ladies (housewives) who mostly attended are interested in making these healthy food products after being given a tester. Even after the event, we were invited to participate in the Watesari Village PKK organization (PKK abbreviated from the Indonesian version organization of Family Welfare Empowerment) activities which were held at the village hall. We were asked to explain again about the program "Utilization and Processing of Starfruit into Various Food Products" to PKK ladies in Watesari village and provide testers of products that have been made. PKK ladies who attended were generally very enthusiastic, listening to every step of making the product described. The tester results show that many PKK ladies prefer the products that have been served.

CONCLUSION

This community service activity aims to provide awareness to the community regarding the benefits of star fruit and processing star fruit into various processed food products, namely jam, ice cream, jelly candy, and pudding. It is hoped that the community can make various food products from the star fruit independently. This activity has been carried out well and the community enthusiastically welcomed when given education about the benefits of star fruit for health, how to process star fruit into nutritious food products in a simple way, and distribution of testers for various food products from star fruit for free.

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Original Title:

Pemanfaatan dan Pengolahan Buah Belimbing Menjadi Aneka Produk Pangan di Desa Watesari, Kecamatan Balongbendo, Kabupaten Sidoarjo

Abstrak. Belimbing merupakan tanaman buah yang berupa pohon berasal dari negara Malaysia, kemudian menyebar luas ke berbagai negara yang beriklim tropis lainnya termasuk di wilayah Indonesia. Belimbing manis memiliki manfaat yang beraneka ragam baik bagi kesehatan tubuh. Kandungan dalam buah belimbing juga dapat digunakan untuk pencegahan terhadap penyakit diantaranya mengatasi batuk, mengatasi demam, kencing manis, mengurangi kolesterol yang tinggi, mengatasi sakit tenggorokan. Salah satu bentuk kegiatan yang dilakukan oleh Program Studi S1 Farmasi Universitas Anwar Medika adalah pengolahan buah belimbing menjadi aneka produk pangan, yaitu selai, es krim, permen jelly, dan puding. Pemanfaatan dan pengolahan ini merupakan salah satu bentuk nyata dalam meningkatkan perekonomian di Desa Watesari. Pengolahan buah belimbing menjadi aneka produk pangan dilakukan oleh tim pengabdian masyarakat Program Studi S1 Farmasi Universitas Anwar Medika. Kegiatan yang dilakukan meliputi penyuluhan, pengolahan dan pembagian aneka produk pangan dari buah belimbing. Kegiatan yang dilakukan mendapatkan respon positif dari Kepala Desa dan Warga Desa Watesari dan masyarakat Desa Watesari sangat antusias saat pembagian aneka produk pangan berbahan dasar buah belimbing.

Kata kunci: Pengolahan buah belimbing, aneka produk pangan, makanan bergizi