Development of Diversified Cassava Processed Products in Kemiri Village, Tanjungsari, Gunungkidul

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Abstract. Cassava is the main agricultural commodity in Kemiri Village located in Gunungkidul Regency. Commonly, farmers simply sell it raw because it is considered practical and can generate money quickly. Cassava itself has the potential to be developed not only as a raw product but also as a processed product such as cassava chips. With attractive processing and packaging, its added value will rise significantly. This service activity aims to diversify processed cassava products in the form of chips to support the economy of partner communities. This service activity carried out counseling on the potential of cassava development and training on making cassava chips. In this activity, various cassava chip-making tools were also given such as manual or machine chip-making tools. Partners seemed enthusiastic about participating in various series of events. The follow-up plan is related to the development of marketing cassava chips processed by partners.

Keywords: cassava, diversified, financial, income

1 Introduction

Regional development through local potential is an important point that can be held by all parties [1]. Gunungkidul Regency is an area that has a high production of cassava. The average production reaches 170-200 quintals per hectare [2]. So far, the price of cassava in Gunung Kidul is not good. If sold raw, the cassava’s price is IDR 3,000-5,000 per kilogram. But if it has been processed into Mocaf flour, for example, the price can reach IDR 14,000/kg. Therefore, some parties try to process cassava into various processed high-value products [3, 4].

Kemiri Village, Tanjungsari District, Gunungkidul Regency is an area that has high cassava production. The potential for cassava development needs to be developed to improve the welfare of the people of Kemiri Village in particular, and the people in Gunungkidul Regency in general. Cassava is an agricultural commodity that has the potential to be developed into various processed products that can increase the added value of this commodity [5]. In Kemiri Village itself, cassava processing is still limited to processed Mocaf, or sold in raw form. The potential of cassava development is something that needs attention from various parties to increase the welfare of the surrounding community. Processing cassava into quality products is still difficult for partners. Until recently, efforts to diversify processed cassava products have not been made because of the limited knowledge and skills of partners in processing cassava, even though the potential possessed by cassava is fairly large. The diversification of agricultural products is important for sustainable development [6].

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Cassava is the third staple food after rice and corn for Indonesians [7]. The plant can grow all year round in the tropics and has a high adaptability to the conditions of various soils. This plant has a fairly complete nutritional content. The chemical and nutritional content of cassava is carbohydrates, fats, proteins, dietary fiber, vitamins (B1, C), minerals (Fe, F, Ca), non-nutritional substances, and water. Additionally, cassava tubers contain non-nutritional compounds tannins [8]. One of the processed foods derived from cassava is cassava chips. Chips, both traditional and industrial, are a type of food that is widely known to Indonesians. Chips are loved because they taste good, are crispy, durable, practical, easy to carry and store, and can be enjoyed anytime. The processing of cassava into chips is considerably simple. Successively begins with finding good cassava, peeling it, washing and thinly slicing it with a special slicing tool, and then frying it until crispy [9].

Many of the residents in Kemiri Village apply an intercropping system and seasonal types of crops to produce various commodities and some of the dominating seasonal crops are corn, beans, and cassava [10]. However, in reality, farmers prefer to sell agricultural products in the form of raw products because they want money quickly. In addition, the community is still less creative in processing and reluctant to look for raw materials outside the area. Therefore, Kemiri Village has the potential to develop processed products from these commodities to increase selling prices and the community's economy. This service activity, thereby, aims to diversify processed cassava products in the form of chips to support the economy of partner communities.

2 Methodology

This community service activity was aimed at providing knowledge and skills in processing cassava into chips that have high added value. The methods used in this activity were presentations, demonstrations, and practices both individually and in groups.

Presentation methods

This method was used to convey several things related to benefits, functions, tool materials, and how to make cassava chips from the beginning to the finished product. More importantly, to see the potential possessed by cassava to be increased in added value by not only selling it raw.

Demonstration Method

This method was used to demonstrate the making of cassava chips using tools provided by the service team. It is hoped that, with this method, the participants can directly practice making cassava chips with high added value.

Practice Methods

This method was carried out to train members of KWT Ngudi Sari in making cassava chips. This method was done so that these craftsmen have direct experience in making product packaging.

3 Results and Discussion

General Conditions

Geographically, Gebang Hamlet is located in one of the hamlets within the South Zone called the Gunung Seribu development area (Duizon gebergton or Zuider gebergton), with an altitude of 0 m – 300 masl. The bedrock forming it is limestone characterized by conical limestone and is a karst area. In this region, many underground rivers are found. It has an area of 1,125 ha with coordinates 8.06903° LS, 110.57354° N. The distance of Kemiri Village from the center of Gunungkidul Regency is 13 km. Kemiri Village consists
of 11 hamlets and is divided into 11 RW and 65 RT. Kemiri Village is a village in Tanjungsari District, Gunungkidul Regency, Yogyakarta Special Region Province.

**Implementation of Activities**

Kemiri Village has fertile natural resources, especially in the results of cassava commodities. Thus, efforts in processing the cassava commodity are necessary. Farmer is the highest percentage job among Gebang Hamlet residents whose land has partly been planted with cassava and other crops as their livelihood. They sell their raw cassava harvest in the market while some are made into traditional foods such as Pathilo. However, along with the development era and a variety of more attractive foods, raw cassava and Pathilo are gradually decreasing in demand which further resulted in the declining income. The process of making Pathilo is also quite long and requires high electrical power. A solution is thereby needed to process cassava into food that can be sold and is simple at the same time. The service team took the initiative to make cassava in the form of chips with various flavors. The study on the potential for cassava development begins with interviewing and observing the farmers in the local area (Figure 1).

![Figure 1 Interviews with farmers](image1.png)

The implementation of the "Utilization of Cassava Commodities as Processed Products" service program was carried out on Wednesday, February 1, 2023, to assist MSMEs in Kemiri Village in producing food made from cassava. The location of this counseling was at Balai Dukuh Gebang, Kemiri, Tanjungsari, Gunungkidul. The material explanation regarding the cassava production was delivered by Mr. Zuhud Rozaki. The number of participants who participated in the counseling and training was 17 people.

![Figure 2 Dissemination Slide and Figure 3 Group photo after dissemination](image2.png)

The implementation of detail activities are as follows:

1. Counseling on the types of cassava, the nutritional content found in cassava, the benefits of cassava, post-harvest problems, and various preparations from cassava. Continued with a question-and-answer session between the speaker and the counseling participants. The purpose of this activity was for the community to know and be aware
of the potential that can be developed from cassava commodities.

2. Training on how to use dynamo and manual cassava cutting tools, participants were required to try to operate the cassava cutting tools.

3. Providing training in creating cassava chips in various flavors to attract consumers.

4. Providing information about packaging designs that are of interest to consumers, so that the chip products can later be accepted by consumers widely and sold in big quantities. Hence, contribute to the economy and welfare of the community.

5. Granting cassava-cutting equipment and sealers to partners. The manual cassava-cutting tool and machine were granted by the service team of the Universitas Muhammadiyah Yogyakarta. Additionally, a sealer is also given for packaging the chips later. With the help of these tools, the residents of Kemiri Village are expected to use the tool to support their production process to produce quality, good, and marketable products.

6. Finally, the village governance through the manager of the SME center of Kemiri Village, provided a marketing center to showcase the SMEs partners products. SMEs in Kemiri Village were responsible for collecting the products from Kemiri Village residents and for proceeding to the marketing process. Assistance from the Village in marketing and promotion gave more enthusiasm to partners to develop the products.

Follow-up Plan

Service activities in making chips as a step to diversify processed cassava products do not only stop at finished chip products but there needs to be a follow-up plan to develop the results of this activity. The follow-up plan determined in this service activity is to assist and monitor the development of the community in processing their cassava into chips that have higher added value, as well as the development of marketing strategies so that these chip products can be marketed even better and thereby contribute to economic improvement and welfare of the target community.

4 Conclusion

Kemiri Village located in Gunungkidul Regency is a village that produces a lot of cassava. Most farmers only sell it raw because it is easier and faster even though this cassava has the potential to be developed into various processed food products such as cassava chips with various flavors. This service activity carried out counseling on the potential of cassava development and training on making cassava chips. In this activity, various cassava chip-making tools, both manual and machine, were also given. Partners seemed enthusiastic about participating in various series of events. The follow-up plan is related to the development of marketing cassava chips processed by partners.
References


