



Regional Leading Product Development Program of Wanagiri Taro Processing Group, Sukasada District, Buleleng Regency

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ABSTRACT

Development prospects and opportunities for processed foods derived from taro have recently increased. Taro crackers are one of the snack foods that are in high demand among consumers. The Taro Processing Group of Wanagiri Village, Sukasada District, Buleleng Regency, formed in 2020 with ten members, participates in Regional Superior Product Development Programme activities. Partners have produced and marketed taro tubers processed into taro chips, but the process has not been exhaustive, and partners wish to increase the quantity and quality. As a result of their lack of knowledge in the fields of processing and effective business management, partners encounter difficulties in managing production and marketing. This activity aims to equip the Wanagiri Village Taro Processing Group with the skills and knowledge to manage local natural resources and the entrepreneurial mentality to capitalise on business opportunities related to Wanagiri Village conditions. The implementation method involves coaching, training, mentoring, and structured consultation on various partner-related issues. Regional Leading Product Development Programme Wanagiri Taro Processing Group, Sukasada District, Buleleng Regency, has yielded positive results. The Wanagiri Taro Processing Group increased its value and enhanced its living conditions. Regional Leading Product Development Programme application is possible. The community can assimilate up to 80% of knowledge regarding the processing of taro chips with varying flavours, product packaging, and marketing, which will aid in product development. In addition, comprehension exists regarding cultivating taro plants in the backyard, using taro processing waste as animal fodder, and business management. This activity should be performed continuously, along with assistance, so that the group can independently produce and sell taro snacks with various flavors.

1. INTRODUCTION

1.1. Research Background

The processing of taro-based products has better prospects and development opportunities at present. Taro processing carried out so far is based more on conventional conception[1]. One of the processed taro products is taro chips[2]. Taro chips are a snack

product processed by people in the Wanagiri area, Sukasada District, Buleleng Regency, Bali Province. 'Chips or chips are a type of snack in thin slices of tubers, fruits, or vegetables fried in vegetable oil [3]. To produce a savory and crunchy taste, it is usually mixed with flour dough given certain spices [4]. In general, chips are made through the frying stage, but some are only through drying or drying[5]. Chips can taste predominantly salty, spicy, sweet, sour, savory, or a combination. Taro chips



are widely produced with various flavors and variants [6]. In the chip processing process, the type, quality of raw materials and auxiliary materials vary greatly, environmental conditions that are difficult to control, and uncertain process endpoints [7]. Soaking in calcium in the product will also give it a good texture [8]. Conventional product technology is characterized by an unfavorable picture, namely products are processed with a low level of sanitation and hygiene, using raw materials with a low level of quality or freshness, food safety is not guaranteed, technology used for generations, and businesses are managed by families with inadequate levels of management ability [9].

The process of processing chips that vary in each village is a distinctive feature for producing villages. It also affects different food quality and safety [6]. Therefore, the products produced are not uniform quantitatively or qualitatively, with varying durability, making it difficult to standardize. Therefore, it is necessary to develop conventional processing with several improvement efforts to apply basic feasibility in food processing [10]. Quality management and safety aspects of raw materials and products must be studied for business development, entrepreneurship, and product marketing development [11][12]. With the problem of various taro chip processing processes, it is necessary to apply the basic feasibility of GMP (Good Manufacturing Practice) or CPMB (Good Food Production Methods) and SSOP (Sanitation Standard Operating Procedures) to produce quality taro chips that are safe for consumption [4][13][14].

There are several taro processing groups in Buleleng Regency, one of which is in Wanagiri village. The Wanagiri Taro Processing Group in Wanagiri Village, Sukasada District, Buleleng Regency, chaired by Komang Diantini, was formed in 2020 with 10 members. This group produces an average of 25-50 kg of taro per day, with a turnover of Rp. 200,000 – Rp. 250,000 per day. This group already has simple bookkeeping to record group members' finances and savings and loans activities. Taro products that have been produced are usually marketed to markets around the village, up to Sukasada sub-district. The processing activities of taro processed products carried out by the Wanagiri Taro Processing Group can be seen in Figure 1.

1.2. Literature Review

Taro is a root commodity crop often a carbohydrate source [15]. Carbohydrates in taro are around 70-80% so it can be used as a substitute for flour [16]. In addition, taro also has other nutrients such as protein and vitamins. The macronutrient and micronutrient components of taro include: energy 98 Cal, protein 1.9 g, fat 0.2 g, carbohydrates 23.7 g, calcium 28.0 mg, phosphorus 61 mg, iron 1.0 mg, vitamin A 3 RE, vitamin C 4.0 mg, vitamin B1 0.13 mg, water 73.0 g, 85% edible ingredients [17]. Taro has a long time, namely the emergence of itching on the tongue or throat if the processing is not right. The itching is caused by oxalate compounds contained in taro [16]. Oxalate compounds can be reduced by soaking taro in salt water or whitening [18]. Taro products are mostly processed simply such as boiled, fried, steamed, vegetable and made chips because of ignorance of taro processing technology. The diverse use of taro tubers is needed in order to maximize existing resources and can be an alternative processed product on the market [19]. Taro can be processed into taro chips with various flavors. 'Chips or chips are a type of snack in the form of thin slices of tubers, fruits, or

vegetables fried in vegetable oil [3]. To produce a savory and crunchy taste, it is usually mixed with flour dough given certain spices [4]. In general, chips are made through the frying stage, but some are only through drying, or drying [5]. Chips can taste predominantly salty, spicy, sweet, sour, savory, or a combination. Taro chips are widely produced with various flavors and variants [6].

1.3. Research Objective

This study aims for the taro processing group community in Wanagiri Village to have skills and insight in managing local natural resources and have an entrepreneurial spirit, to open business opportunities related to the conditions of the Wanagiri Village area. The community expects taro chip processing training activities to produce good, and better production management. Partners are also given knowledge about work management, business management, so as to be able to manage time and run the business as well as possible, thereby increasing income and family welfare.

2. MATERIALS AND METHODS

1.1 Materials and Equipment

The Wanagiri Taro Processing Group will be given knowledge on postharvest handling insights, taro processing into taro chip products of various flavors, how to develop taro products, including packaging and product storage so that the shelf life remains longer. Partners are also given knowledge about taro cultivation in the yard, utilization of taro processing waste for animal feed, and business management and simple bookkeeping. The knowledge package provided is expected to improve the skills and competencies of group members in developing innovative taro chip products.

To support the process of developing multi-flavored taro chip products, the following infrastructure is needed: 1) Leaflets containing how to process multi-flavored taro chip products, taro cultivation in the yard, utilization of taro processing waste for animal feed, and simple business management and bookkeeping. 2) Schedule of activities and time required. 3) Processing tools for the practice of making processed taro chips. 4) Consumables are ingredients used to make taro chips of various flavors.

1.2 Application

The implementation method is the pattern or system of actions to be carried out or the sequence and stages that are necessary in carrying out community service activities. The implementation methods include coaching, training, mentoring, structured consultation on various obstacles in an effort to provide added value for partners. The implementation process determines the achievement of implementation objectives. One way that goal is achieved is with the use of appropriate methods. Method is one of the tools to achieve goals. Methods about achieving implementation objectives in order to be included in long-term memory. Method is an aspect that can smooth the implementation path towards what has been formulated. Various methods that can be applied in implementing community service include: lectures, questions and answers, discussions, demonstrations, modeling, inquiry, simulations, games, role playing, and others. These methods can be implemented separately or combined according to the material studied's capabilities and characteristics. The

methods of implementing the planned activities of Regional Leading Product Development Program Wanagiri Taro Processing Group, Sukasada District, Buleleng Regency are: 1) Using interview and discussion methods to be able to find out the problems experienced by partners. 2) Face-to-face method, so that partners gain knowledge about Good Food Processing Practices (CPMB / GMP) and Sanitary Hygiene (SSOP) processing of taro chips of various flavors, packaging, storage, marketing, entrepreneurship and business management. 3) Direct practice, guided by instructors who are competent in their fields, so that partners can apply the technology provided and can handle problems in handling product processing and business management

3. RESULT AND DISCUSSION

3.1. Result

The activities of Regional Leading Product Development Program of Wanagiri Taro Processing Group, Sukasada District, Buleleng Regency have been running smoothly. This activity was carried out on Wednesday, 11 April 2023, in the form of counseling or theoretical studies to provide an understanding of the development of taro chips products of various flavors, product manufacturing, providing equipment assistance, providing knowledge about packaging and labeling on taro products, product marketing and business management. (Figure 1). The activity continued with direct practice of making taro chips of various flavors. The participants in this activity were 10 people from the Taro Processing Group of Wanagiri Village. The extension team donated tools and materials to develop taro chip processed product management. This community independence activity has been published in newspaper and electronic media.



Fig. 1. Participants and the Regional Leading Product Development Program from the Wanagiri Taro Processing Group, Sukasada District, Buleleng Regency (A, B), Presentation of Service Material (C), (D).



Fig. 2. Product Manufacturing Process (A), Multi-Flavored Taro Chips Products (B, C)

3.2. Output

In detail, the output achieved from the Regional Leading Product Development Program Wanagiri Taro Processing Group, Sukasada District, Buleleng Regency includes appropriate technology, mass media publications, videos activities, and processed products of taro chips.

3.3. Advantage

The Wanagiri Village Taro processing group gained skills in developing innovative product management of multi-flavored taro chips. From 10 people, 8 people or 80% have mastered making taro chips of various flavors, understand taro cultivation in the yard, and utilize taro processing waste into animal feed

3.4. Partner contributions to implementation

All participants of the Regional Leading Product Development Program Wanagiri Taro Processing Group, Sukasada District, Buleleng Regency were enthusiastic to participate in the training. All partners actively participate in direct practice in activities and expect continuous assistance in developing superior product management of taro chips with various flavors.

3.5. Implementation of Community Service

The inhibiting factor in the implementation of the Regional Leading Product Development Program Wanagiri Taro Processing Group, Sukasada District, Buleleng Regency, is the difficulty of finding a schedule for the implementation of activities amid the busy community because of the many customary activities in the village so that the implementation schedule is difficult to agree. The supporting factor of this activity is that the members of the Wanagiri Taro Processing Group are very enthusiastic and enthusiastic to know the development of superior taro-based product management, namely taro chips of various flavors until the whole activity ends. The location prepared for the implementation of this activity is very supportive and representative. Communication with the group

leader and village officials can overcome obstacles in implementing the Regional Leading Product Development Program from the Wanagiri Taro Processing Group, Sukasada District, Buleleng Regency. Counseling and practice activities can take place smoothly. 10 group members attended counseling and direct practice activities. Furthermore, the team will continue to assist in developing superior taro-based products, namely taro chips of various flavors and product marketing. The next plan is that the implementation team will accompany the group to develop various flavored taro chip products by helping to test the products in the laboratory to get product legality.

4. CONCLUSION

The conclusion that can be drawn from this activity is that the activities of Regional Leading Product Development Program Wanagiri Taro Processing Group, Sukasada District, Buleleng Regency have run smoothly. The Wanagiri Taro Processing Group gained added value and improved living standards. Regional Leading Product Development Program can be applied. Knowledge on processing taro chips of various flavors, product packaging, and marketing can be absorbed as much as 80% and help the community develop product. In addition, knowledge about cultivating taro plants in the yard, using taro processing waste into animal feed and business management can be understood. It is recommended that this activity be carried out continuously and accompany the group so that the group can independently make taro chips of various flavors and be able to market them.

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