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Empowerment of Youth in Cikarawang Village, Bogor Regency through Training and Assistance in Manufacturing Pharmaceutical Technology-Based Kitchen Seasoning Powder

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Abstract: Cikarawang Village, Dramaga District, Bogor Regency has a Merdesa community which engaged in plantations. This community has become UMKM but has not been able to significantly improve people's welfare. From the team's initial discussion with the Kebun Merdesa Community, information was obtained that Cikarawang Village has potential resources that has not been maximized in its empowerment, especially in downstream of Merdesa plantation products. The empowerment of youth who are involved in the downstream activities of Kebun Merdesa products will be carried out in stages of starting from socialization, consulting with the Kebun Merdesa community, establishing a micro business plan for downstream seasoning powder products, and building production facilities, along with assistances. The program is held with assistance to processing units for plantation products using pharmaceutical technology in several stages. Furthermore, assistance is carried out to the product packaging unit for seasoning spices and digital technology-based marketing units. This program also involved educational units. Promotional media in the form of billboards and banners are made and installed in strategic locations for partners to complement this program which also serves as a means of information for the village community. This activity involved 2 lecturers and student from Pharmacy Bachelor Program with combined the program of Merdeka Belajar Kampus Merdeka (MBKM) which oriented towards community service. The formation of micro-business units in Cikarawang Kebun Merdesa Village, increasing the productivity and creativity of Cikarawang Village's youth, and also providing added value economically, socially, and culturally were implemented.

Keywords: seasoning powder; empowerment; youth

1. INTRODUCTION

Cikarawang Village is located in Dramaga District, Bogor Regency with an area of 226.56 ha. This village is one of ten villages that are included in the village area around the campus of the Bogor Agricultural Institute. Cikarawang Village is bordered by the following areas: 1 To the north of Cikarawang Village it is bordered by the Cisadane River, 2 To the south it is bordered by the Ciapus River, 3 To the east it is bordered by Situ Gede Village, and 4 To the west it is bordered by the Cidinding River. Cikawang Village has geographical conditions with a land elevation above sea level of 193 asl and average temperatures ranging from 25º Celsius - 30º Celsius. Most of the area of Cikarang Village is rice fields and plantations

covering an area of 128,109 hectares (about 70% of the area). With such a large area of land for agriculture, Cikawang Village has enormous potential, especially for paddy rice and secondary crops. Palawija commodities that are widely cultivated by Cikarawang farmers are sweet potatoes and peanuts (Humaira, 2011). The extent of the plantation area is an aspect that needs to be maximally empowered (Prayudha, 2022).

The Merdesa Garden Community, which is located in Carangpulang Village, Cikarawang Village, has activities that still need assistance in downstreaming its plantation products. This information was obtained when the team held a discussion which was initiated in January 2022. This activity obtained information about the condition of village youth who are members of the Merdesa Garden Community. In the discussion process, the team also provided insight into business opportunities for making simplicia powder for kitchen spices. The team, accompanied by the Chairperson of the Merdesa Garden Community (Ade Setaiawan Karsad) explained the business and marketing processes and opportunities to increase welfare through the business of making simplicia powder for kitchen spices which will be carried out through digital/online technology and the cooperation of MSMEs. However, during the discussion, it was stated that around 30% of the youth in Cikarang village were still unproductive and had low incomes. This is also due to the low employment opportunities in these locations. The low number of human resources with tertiary education is a factor in the limited abilities and skills of rural youth, especially in accepting new technology that can be utilized for the development of home industry products. Low income is also a factor in partners' limited working capital to develop large-scale and technology-based production of goods. Limited knowledge and skills regarding the process of making simple powdered herbs based on pharmaceutical technology became the basis for the team to contribute to training and mentoring skills for making simple powdered herbs to produce good quality products, in accordance with the potential of plants owned by Cikarawang Village as a characteristic. typical village.

Figure 1. Team discussion with the Merdesa Garden Community

Support for this program proposal was also carried out in collaboration with the Merdesa Garden Community in Cikarang Village as a partner community for LPPM Pakuan University, becoming a village that has the most significant social impact in the UKM Village program in Cikarawang Village, Dramaga District, Bogor Regency. It is hoped that this program will be the initiation of the formation of MSMEs driven by rural youth who produce powdered spices based on pharmaceutical technology in the manufacturing process.

This program is based on the results of research by Pakuan University lecturers consisting of Utami and Nhestricia (2019) regarding the manufacture of simplicia and extraction of natural ingredients using the maceration method, Nurmala et al (2021) regarding healthy drinks based on natural ingredients, namely ginger and lemongrass which are widely liked by the public practice and can be made easily at home, Nhestricia (2017) regarding development in the formulation of natural ingredients, namely ginger has good properties for the body and can be used as a healthy drink, Saputri et al (2021) regarding the use of technology-based natural ingredients which states that pharmaceutical technology effect on the product manufacturing process. The next stage that will be carried out is team coordination with village youth who are members of the Merdesa Garden Community, identifying the potential of natural ingredients as a source of making seasoning powder. The process of discussion and identification is shown in Figures 1 and 2.

Figure 2. Identification of Potential Natural Materials in Merdesa Plantation

The application of lecturer research is implemented in this program to support the Independent Learning-Independent Campus (MBKM) program, namely IKU 5 (Application of Lecturer Research) and IKU 6 (Partnership). The university in this case established a Community Service partnership (PKM) with the Mardesa Garden Community which involved village youths in Carangpulang Village, aimed at increasing the productivity and income of village youths as well as increasing the quantity and quality of PKM produced by Pakuan University. The parties involved in this activity were 3 lecturers and 2 students across study programs, namely from the Pharmacy and Biology Education Study Programs as well as village youths from the Merdesa Garden Community who were partners.

2. METHOD

This PKM activity was carried out in Cikawang Village, Bogor Regency. The activities carried out are empowerment and training in the manufacture of pharmaceutical technology-based kitchen spice powders. The methods used include:

1. The pharmaceutical technology that will be applied includes the application of simplicia manufacture starting from the collection of raw materials (ginger, turmeric, kencur, and galangal), weighing the ingredients, wet sorting, washing the ingredients with a flowing water system of 3 tiered tanks, drying with an optimum temperature oven, sorting dry, weighing dry materials, making powder using a pulverizer machine, re-weighing materials in powder form, packing in suitable containers, storing in optimal temperature and humidity. Furthermore, assistance will be provided in utilizing quality simplicia manufacturing technology in the form of skills in making kitchen spice powders in the form of ginger

powder, turmeric powder, kencur powder, and galangal powder. Village youth will be divided into several groups based on the commodity of natural ingredients to be processed, then practice processing raw materials into quality simplicia powder based on pharmaceutical technology. Education on the selection of packaging materials will also be carried out so that village youth can determine the best packaging for the commodities they will produce. Assistance in the packaging of kitchen spice powders will be carried out in the division of youth groups based on the packaging material model.

2. The next stage is the labeling of the finished product with the product name as a result of the joint decision of the partners. Label content is adjusted to the official label content of natural product pharmaceutical products that are marketable. Marketing is carried out in the form of an online market with assistance in mastering internet-based technology in the marketplace application. Assistance in improving the welfare of the community will also be continued up to the socialization stage of sales accounting so that partners can analyze in real terms the increase in production and increase in income. Facilitation of marketing cooperation will be carried out for local governments, the private sector, and educational units.
3. Provision of socialization and skill training on how to make affordable pharmaceutical technology-based kitchen spice powders so that it is hoped that mothers can make their own at their own homes for their own use or for sale to improve the community's economy.

Partners in this program will contribute in facilitating activities at the Merdesa Plantation and also preparing raw materials that will be processed into commodities. The formation of the MBKM curriculum which involves partners, lecturers and students will be a solution to the problem of sustainability with an orientation towards community service activities.

The role of each team member in this program is divided into 2 areas. Member 1 is tasked with reviewing literature, analyzing partners' conditions in the form of problems and also solutions to partner problems, conducting training on making pharmaceutical technology-based kitchen spice powders and providing assistance in selling technology-based products. Member 2 is in charge of providing education on the contents and benefits of seasoning powder, conducting training on packaging seasoning powder products, and preparing reports. This program also involved 1 Pharmacy Study Program student. As for this PKM, students

are given an assignment to make a community service project in making technology designs for simplicia production from the potential of the Cikarawang village, packaging, and digital marketing models for finished products. In this activity, students who are involved have the potential to be recognized as MBKM in the Natural Materials Technology course for 2 credits and are given a Diploma Companion Competency Certificate. Students are expected to be able to apply natural material technology, especially in making good quality simplicia.

3. RESULT AND DISCUSSION

The implementation of this PKM activity can increase the knowledge of Cikarawang residents in terms of utilization, processing, packaging and marketing of various rhizomes into pharmaceutical technology-based kitchen spice powder products. The implementation of the PKM has been published in the print media of the Radar Bogor Newspaper which was published on January 3, 2023 with the hope that the wider community can recognize and get information that residents of Cikarawang Village have received training on how to make spice powder and become a promotional medium for marketing residents' products. Pharmaceutical technology-based cooking seasoning powder manufacturing training can be seen in Figure 4.

Processed kitchen spice powders that are packed in attractive packaging and sold under certain brands and with publications through Radar Bogor and YouTube FMIPA UNPAK are a solution to the problems so far faced by rhizome farmers, so that the products produced can be marketed with a high selling value. higher and the income of rhizome farmers can increase and improve the family economy. The process of making kitchen spice powder and the results of kitchen spice products can be seen in Figures 3 and 5.

Figure 3. The process of making seasoning powder

Figure 4. Pharmaceutical technology-based cooking seasoning powder manufacturing training

Figure 5. Kitchen seasoning powder products

The stage of this activity that must be completed is the final evaluation of the training participants regarding the calculation of an increase in income from the selling price of pharmaceutical technology-based kitchen spice powders. In its raw form, the price per kilogram of rhizomes only ranges from Rp. 8,000 – 15,000, - whereas if the rhizomes are sold in powdered form, the price per pack of 4 grams is Rp. 1,000.

4. CONCLUSION

Based on the results obtained from this PKM, it can be concluded that this PKM activity can increase the

knowledge and skills of the youth of Cikarawang Village on how to overcome the problems they face, namely by processing various rhizome plants into alternative food products in the form of seasoning powder which has a selling value. high yields, long shelf life and better marketing techniques. Documentation during the training which was published on the Radar Bogor website and FMIPA UNPAK's YouTube can also be a media campaign and initial information that the residents of Cikarang Village will produce powdered spices based on pharmaceutical technology. Processing of rhizomes into powdered spices based on pharmaceutical technology which are then packaged in attractive packaging and sold under certain brands is a solution to the current problems faced by rhizomes farmers, related to the low selling price of rhizomes due to the price game of middlemen. The resulting product can also be marketed with a higher selling value so that the income of the rhizome farmers can increase and improve the family economy.

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