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Strategy to Improve Community Economy with Inovative Palm Sugar Products for High Economics Value

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ABSTRACT

Banyumas Regency is one of the priority target areas of Kosabangsa 2024 in Central Java. Sambirata Village is one of the villages located in Cilongok District, Banyumas Regency, which is an area that is a poor category village with various low economic problems. Most of the residents of Sambirata Village work as farmers and farm laborers who depend on their income from the agricultural and plantation sectors. The problem of the people of Sambirata Village, Cilongok District, Banyumas Regency is the low level of income of its people, resulting in low economic capacity and low levels of community welfare. Marketing of plantation products, especially coconut sugar which is processed into palm sugar, is still relatively cheap because the quality of palm sugar is still low with a highwater content so that if it is sold to the local market at a relatively cheap price. The solution carried out through the Kosabangsa program is to strengthen the people's economy through the utilization of Sambirata Village's superior product, namely palm sugar. The strategy for strengthening the people's economy can be carried out by downstreaming palm sugar products and packaging them to be marketed with a higher economic value so that people can improve their welfare. With product diversification and good marketing, it is expected to eradicate poverty in the community and increase the economic independence of the village.

Keywords; Productive economy, Product Diversification, Ant Sugar

1. Introduction

The Kosabangsa Program is a funding program to bridge collaboration in the development and implementation of science and technology produced by universities to be utilized for community needs. Banyumas Regency is one of the 2 priority target areas of Kosabangsa 2024 in Central Java. BPS data states that the number of poor people in Banyumas Regency in 2024 is 12.53%. From data taken from the Central Java Bappeda, in 2024 there are 60 extreme priority poor villages in 2024. Cilongok is one of the sub-districts that has poor villages. Sambirata Village is one of the poor villages where the livelihoods of the Sambirata Village community only rely on village natural resources whose management has not been optimized. Most of the people work as farmers (40%), palm sugar craftsmen (40%) and others (20%). The average income of the community is still below 700 thousand per month. This shows a relatively low level of welfare. Sambirata Village is one of the villages located in Cilongok District, Banyumas Regency, which is a highland area with an altitude of 433.8 meters above sea level. This village is located on the edge of the forest west of Mount Slamet which has a cool climate with an average temperature of 26 ° C and an average humidity of 70% -85% and quite high rainfall reaching 2000-3000 mm / year. Most of the residents of Sambirata Village work as farmers, farm laborers and coconut sugar craftsmen, who depend on income from the agricultural and plantation sectors.

Coconut plants can grow well in various locations with varying altitudes, fertility, rainfall, and humidity. Banyumas Regency has the potential to be the largest producer of crystal coconut sugar in Indonesia. The number of coconut palm trees in Banyumas Regency is 643,832 with a land area of 5,111.49 hectares and production reaching 54,985.38 tons/year. This can make Banyumas Regency the largest coconut sugar center in Indonesia (Dinperindagkop Banyumas Regency, 2019). Coconut sugar is a national strategic commodity that is targeted in 2024, to be able to substitute the use of cane sugar. Banyumas Regency is one of the centers of coconut palm commodities in Central Java Province. Coconut plants are also widely found in the Banyumas area such as in Sambirata Village, Cilongok District, which is classified as extremely poor.

In the Krido Yuwono palm sugar farmer group partners located in the Grumbul Glemgang area of Sambirata Village, many of the people produce palm sugar from coconut sap. Where in the Grumbul Glemgang area, the people are coconut sugar farmers and only process coconut sap into palm sugar to increase their income, because palm sugar has a higher selling value than coconut sugar alone. Coconut plants can grow well in various locations with varying altitudes, fertility, rainfall, and humidity. Banyumas Regency has the potential to be the largest crystal coconut sugar producing area in Indonesia. The number of coconut palm plants in Banyumas Regency is 643,832 with a land area of 5,111.49 hectares and production reaches 54,985.38 tons/year. This can make Banyumas Regency the largest coconut sugar center in Indonesia (Dinperindagkop Banyumas Regency, 2019). In Sambirata Village, coconut sugar craftsmen only sell their products in bulk at a price of Rp 25,000/kg with product quality that is still not optimal. The introduction of innovative technology to produce premium crystal sugar with a more adequate packaging method for the target market share of hotels or the community through supermarkets will increase the competitive value of the product. With the addition of production costs for sachet packaging of around Rp 10,000/100 sachets, the selling price of crystal sugar in sachets (@ 10 g) can reach Rp 70,000-Rp 80,000 per 100 sachets (total weight 1 kg).

Coconut Sugar is a national strategic commodity targeted in 2024, can substitute the use of cane sugar. Banyumas Regency is one of the centers of coconut commodities in Central Java Province. Coconut plants are also found in the Banyumas area such as in Sambirata Village, Cilongok

District which is classified as extremely poor. One of the problems of poverty in the area is the lack of knowledge and ability of the community in optimizing superior local commodities such as processing coconut sap as a livelihood to meet their daily needs or as an activity that can contribute to community income and improve the standard of living and economy of the community.

Partner Problem Solutions with the 2024 Kosabangsa Program will be implemented by a team to solve priority problems in the form of production/processing of coconut agave and ant gual in product innovation and diversification. Technical/Equipment Field in the form of grants and introduction and use of modern and appropriate production tools, as well as increasing competence, HR management, business networks and marketing.

2. Literature Review

The innovation product that will be implemented for the target partners of Krido Yuwono Gula Semut Farmers Group is a method of processing and packaging premium quality crystal sugar, some of the stages of which have not been used by the crystal coconut sugar processing community. In order to be accepted or potentially developed into a commercial product, it must be ensured that the product has good quality and is proven to be acceptable to the community or consumers when consumed and can be developed that palm sugar can be used as a mixture of nutritious drinks that have high antioxidants and nutritional value (Dwiyanti et al. 2014; 2019). The good quality of the products produced must be guaranteed to be consistent over time. The good quality of the products produced must be guaranteed to be consistent over time. Therefore, the stages in using technological innovation by the community in the target village, which will be carried out, are: 1) FGD of the implementation team, companion team, target partners, activity partners to discuss and determine all activities to be carried out; 2) Preparation of materials and equipment for the application of technological innovation; 3) Dissemination and practice of technological innovation production; 4) Assistance in the production of limited-scale innovation products, including the manufacture of innovation product accessories (labels and packaging); 5) Training and assistance in business management practices (production, human resources, finance); 6) Training and assistance in offline and online marketing practices; 7) Training and assistance in the application of management and quality control and food safety for new products; 8) Training and assistance in the practice of managing new food product certification (PIRT and halal); 9) assistance in compiling daily notes; 10) monitoring and evaluating program implementation periodically; 11) assistance in the implementation of student MBKM; 12) assistance in compiling outputs; 13) assistance in compiling reports; 14) assistance in developing post-program networks and cooperation with local governments (Bappeda, related agencies), private industry, BUMN and banking; 15) preparation of a grand design for a sustainable program between the mentoring team, implementing team, target partners, activity partners, and cooperation partners. By implementing the focus group discussion method; dissemination and technology transfer; field practice in production, business management and marketing; product quality control; and assistance in production, business management and marketing, which are implemented intensively and with a clear timeline, it is expected that the Kosabangsa program will be implemented well in accordance with the expected goals.

For the solution to the problem of partner, namely Gapoktan Gula Semut Krido Yuwono with HKI Innovation in the processing method of crystal coconut sugar rich in antioxidants has been Granted entitled "Process of Making Crystal Coconut Sugar Enriched with Provitamin A and Antioxidants from Red Palm Oil (No. IDS 000004032)" which can be accessed at:

<https://pdkiindonesia.dgip.go.id/detail/87b7ee2714e6afbc242e76ac1c977a4927b4f0c93cf94a017f9ef11dda8679ea?nomor=S00201707800&type=patent&keyword=Proses%20Pembuatan%20Gula%20Kelapa%20Kristal%20yang%20Diperkaya%20Provitamin%20A%20dan%20Antioksidan%20dari%20Minyak%20Sawit%20>. (Dwiyanti; 2014; 2019).

Coconut Sugar is a national strategic commodity targeted in 2024, to be able to substitute the use of cane sugar. Banyumas Regency is one of the centers of coconut commodities in Central Java Province. Coconut plants are also widely found in the Banyumas area such as in Sambirata Village, Cilongok District which is classified as extremely poor. One of the problems of poverty in the area is the lack of knowledge and ability of the community in optimizing superior local commodities such as processing coconut sap as a livelihood to meet their daily needs or as an activity that can contribute to community income and improve the standard of living and economy of the community. The innovation product that will be implemented for target partners its Krido Yuwono Ant Sugar Farmers Group is a method of processing and packaging premium quality crystal sugar, some of the stages of which have not been used by crystal coconut sugar processing communities. In order to be accepted or potentially developed into a commercial product, it must be ensured that the product has good quality and is proven to be acceptable to the community or consumers when consumed and can be developed that ant sugar can be used as a mixture of nutritious drinks that have high antioxidants and nutritional value (Dwiyanti et al. 2014; 2019). The good quality of the resulting product must be guaranteed to be consistent over time.

3. Research Methodology

Partner Problem Solutions The activities of palm sugar farmer partners in Sambirata Village, Cilongok District, Banyumas Regency are carried out through the 2024 Kosabangsa Program funded by DRTPM in collaboration between the Unsoed mentoring team and the Kosabangsa activity implementation team from Unwiku. This Kosabangsa Program will be implemented by the team to solve priority partner problems in the form of palm sugar production/processing in product innovation and diversification. Technical/Equipment fields in the form of grants and introductions and use of modern and appropriate production tools, as well as increasing competence, business management, HR management, cooperation and business networks, and marketing strategies. The method used to solve partner problems is by conducting socialization, training and mentoring to increase capacity in the abilities of partner group members in the fields of business management, HR management, marketing management strategies and the expansion of business networks. While for production problems by providing technology and innovation of appropriate production tools to obtain palm sugar products that have low water content and attractive packaging so that they can enter a wider market.

4. Results

The innovation product that will be implemented for the partners of Gapoktan Gula Semut Krido Yuwono is a method of processing and packaging premium quality crystal sugar, some of the stages of which have not been used by the crystal coconut sugar processing community. In order to be accepted or potentially developed into a commercial product, it must be ensured that the product has good quality and is proven to be acceptable to the community or consumers when consumed. The good quality of the products produced must be guaranteed to be consistent over time. Therefore, the stages in using technological innovation by the community in the target

village have been carried out, namely; conducting FGDs for the implementation team, mentoring team, target partners, activity partners to discuss and determine all activities to be carried out; then partners prepare materials and equipment for the application of technological innovation. Furthermore, disseminating and practicing technological innovation production. The next stage is implementing limited-scale innovation product production assistance, including the manufacture of innovation product equipment. Implement training and assistance in business management practices (production, human resources, finance). Conduct training and assistance in offline and online marketing practices. Provide assistance in compiling daily notes. Furthermore, the next process is to monitor and evaluate the implementation of the program periodically. There is a process of mentoring the implementation of student MBKM. Various activities that have been carried out in the 2024 Kosonabangsa program in Sambirata Village, Cilongok District, Banyumas Regency can be seen in the documentation below.



Gambar 1. Kegiatan sosialisasi dan pelatihan tentang kualitas gula semut yang baik



Gambar 2. Sosialisasi dan penyuluhan manajemen usaha dan peningkatan kemampuan SDM



Gambar 2. Sosialisasi dan penyuluhan peningkatan kemampuan SDM



Gambar 4. Produk gula semut yang masih belum memiliki kualitas baik

5. Discussion

The innovation that will be implemented is Premium quality Crystal coconut sugar product which begins with a multi-stage purification method, to obtain a product with good quality [6]. The stages in the purification process are stage 1 purification using a 60mesh screen/sieve. Stage 2 purification, namely the sap from stage 1 purification is heated until boiling (temperature 1000C), then cooled. The sediment formed is separated by decantation. The clean sap obtained is then heated until the process temperature is reached around 1020C and red palm oil (RPO) or vegetable oil is added as much as 0.3% of the total sap (v/v); the heating is stopped when the final cooking temperature (end point) is reached around 1190C, and the solidification process is continued by stirring continuously without heating for 13-20 minutes, until a semi-solid mixture is achieved; the granulation process of the semi-solid mixture is continued until sugar granules are produced; sifting the sugar granules produced using a 14 mesh sieve; The sifted sugar is dried

in a dryer at a temperature of 500C for 6 hours until the water content is 2-4% [Dwiyanti; 2019]. The premium quality crystal sugar produced is then packaged in alufo or paper sachet packaging equipped with adequate label design, PIRT and Halal legality, and the marketing target is hotels or public consumers.

By implementing the focus group discussion method; dissemination and technology transfer; field practice in production, business management and marketing; product quality control; and assistance in production, business management and marketing, which are carried out intensively and with a clear timeline, it is hoped that the Kosabangsa program will be implemented well in accordance with the expected goals. It is hoped that the implementation of the Kosabangsa program in 2024 in Saambirata Village, Cilongok District, Banyumas Regency can help solve partner problems by providing grant assistance for appropriate innovative technology machines and tools to process palm sugar which can produce quality palm sugar with low water content and attractive packaging that can be widely accepted by consumers.

6. Conclusion

The Kosabangsa activity program from DRTPM in the 2024 budget year where Unwiku as the implementing team and Unsoed as the accompanying team were able to provide the right solution to problems in the poor village category as an effort to alleviate poverty in Sambirata Village, Cilongok District, Banyumas Regency. Partners of the Krido Yuwono ant sugar farmer group will get appropriate technology and innovation tools so that they are used to improve the quality of ant sugar with low water content and can produce products with packaging that is relatively easy to market and is preferred by consumers because the small packaging is practical and economical. So that with the 2024 Kosabangsa program, it can become a program that can increase the economic independence of the people of Sambirata Village, Cilongok District, Banyumas Regency with ant sugar products as superior products and have local wisdom.

We would like to thank DRTPM as the party that provides funding assistance in the procurement of appropriate technology tools for target partners in an effort to increase the income of the poor so that they can realize the economic resilience of the community and improve the welfare of the community in general in Sambirata Village, Cilongok District, Banyumas Regency.

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