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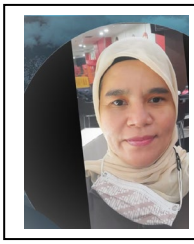

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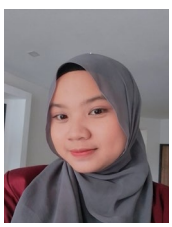

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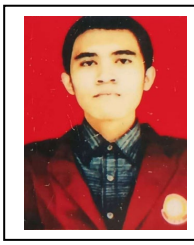

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UTILIZING SURPLUS GEDONG GINCU MANGOES AS CHIPS TO IMPROVE FAMILY ECONOMIES IN JEMBARWANGI VILLAGE

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Abstract. This community service activity (PKM) was conducted in Jembarwangi Village, Tomo Subdistrict, Sumedang Regency, West Java, known for cultivating the exotic Indonesian Gedong Gincu mango. The village faces significant challenges during the harvest season. When the harvest is abundant, mangoes that do not meet export market criteria (grade Ab1) or local market criteria (grade Ab2) accumulate and rot, potentially harming the environment. To address this issue and boost the local economy, the Community Service Program (KKN) introduced the idea of processing these mangoes into value-added products, namely Gedong Gincu mango chips. However, after the KKN program ended, the activities ceased as the community still required ongoing support. Universitas Sangga Buana YPKP Bandung, supported by the PKM Program from Hibah Bima Dikti 2024, is aiding Jembarwangi Village to market the Gedong Gincu mango chips produced and generate significant profits. The methods used include direct demonstrations of mango chip-making techniques, interactive discussions, and practical training with the local community. The results showed high enthusiasm from the residents, but further support is needed to achieve the desired outcomes. The training results are detailed in the article "Utilizing Surplus Gedong Gincu Mangoes as Chips to Improve Family Economies in Jembarwangi Village."

Keywords: Community Service Activity (PKM), Gedong Gincu Mango, SDGs, Local Economy Improvement, Value-Added Products.

INTRODUCTION

This community service activity was carried out in Jembarwangi Village, Tomo District, Sumedang Regency, West Java, an agricultural area rich in natural resources, particularly exotic fruits such as Gedong Gincu mangoes. The village is located in a lowland area with an average of 75 rainy days per year, making it suitable for cultivating Gedong Gincu mangoes (Sumedang, 2024). Tomo District itself is one of the mango-producing districts in Sumedang Regency, consisting of nine villages: Bugel, Jembarwangi, Cicarimanah, Cipeles, Darmawangi, Karyamukti, Marongge, Tolengas, and Tomo (Wulandari & Deliana, 2021). Jembarwangi Village was formed from the division of Darmawangi Village in 1983. According to 2013 data, Jembarwangi Village is categorized as a self-supporting village with a population of 1,670 people in 2023 and 544 households with a population density of 104.02 people per square kilometer (Sumedang, 2024).

Gedong Gincu mango is a prominent variety in Sumedang Regency, with a planting area of 3,410 hectares in 2019 and productivity reaching 74 tons per day (Rustandi, 2023). The uniqueness of Gedong Gincu mangoes, which include the yellow or orange skin color when ripe, red hue near the stem, sweet and slightly sour taste, smooth texture, and strong aroma, make them highly valued as exotic fruits (Sumantri, 2021). Data shows that from 2016 to 2020, there were significant fluctuations in mango production in this area. In 2020,

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production reached 31,867 tons, an increase of 44 percent compared to 2010, which reached 34,903.04 tons (Sumedang, 2024). This uniqueness makes the selling price of Gedong Gincu mangoes quite high, ranging from Rp25,000.00 to Rp60,000.00 per kilogram during the harvest season, with a stable market and promising export opportunities to Japan (Muftiadi et al., (2023);(Lombok, 2016).

The Gedong Gincu mango, known as a premium variety with its sweet taste and soft flesh, holds significant potential for local communities to improve their economic well-being through cultivation and sales. However, on the ground, the village faces several significant challenges, especially during the harvest season.

During the harvest season, mango production in Jembarwangi Village is abundant. Unfortunately, not all harvested mangoes meet the quality standards for export markets (grade Ab1) or local markets (grade Ab2). Field calculations indicate that, on average, one ton of Gedong Gincu mangoes per day do not meet the criteria for sale. These substandard mangoes are often left to rot, leading to economic losses for farmers and environmental issues. Rotten mangoes can contaminate the soil and water and emit unpleasant odors, disrupting the village's environment.

Source: Document PKM (2024)

Figure 1. Trees dan Gedong Gincu Mangoes

To address these issues and boost the local economy, Program Perguruan Tinggi Mandiri Gotong Royong Membangun Desa (PTMGRMD) initiated a program in 2023 through Kuliah Kerja Nyata (KKN) in Jembarwangi Village. This program aims to convert the surplus mangoes that do not meet market criteria into value-added products, specifically Gedong Gincu mango chips. Formerly, people in the Village only turn gedong gincu mangoes into dodol and fruit juice (Umyati et al., 2023). Processing these mangoes into chips is expected to offer a viable solution for the surplus issue while creating new business opportunities for the local community.

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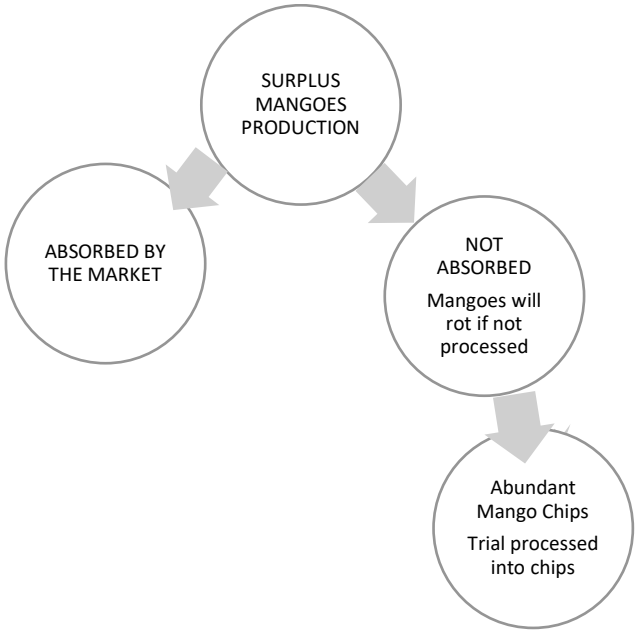

Source: Document PKM (2024)
Figure 2. Framework

During the Community Service Program (KKN) implementation, students collaborated with the villagers to develop skills in processing mangoes into chips. The initial stages included introducing the benefits of mango processing, demonstrating the techniques for making chips, and conducting hands-on training with active community involvement. The results indicated high enthusiasm from the residents, who recognized the potential of Gedong Gincu mango chips as a marketable product that could enhance family income.

However, once the KKN program concluded, the activities ceased because the community still required ongoing support. The production of mango chips involves specialized skills and knowledge of proper processing techniques to ensure the product's quality and marketability. This process necessitates technology that allows mango processing to continue generating income for the residents of Jembarwangi Village. (Sumantri, 2021). Additionally, the community needs assistance with marketing and distribution. Without continuous support and guidance, the efforts to develop the mango chip business might not reach their full potential.

Recognizing the importance of sustaining this initiative, Universitas Sangga Buana YPKP Bandung, supported by the Community Service Program (PKM) from the Bima Dikti Grant 2024, has taken measures to continue its mentorship for the community of Jembarwangi Village. This support includes providing advanced training, technical assistance in the production process, and help with marketing strategies. This encompasses training in processing machinery, business administration, marketing communication, and financial management to enhance adequate financial record-keeping for the business. This training aims to ensure that the Gedong Gincu mango chips produced can be effectively marketed, yield substantial profits, and ultimately enhance the economic well-being of the families in the village.

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Source: Document PKM (2024)

Figure 3. Discussion on Activity Implementation with Village Officials

With genuine efforts aimed at achieving the Sustainable Development Goals (SDGs), particularly in enhancing the quality of life, reducing poverty, and strengthening the empowerment of women, the utilization of surplus Gedong Gincu mangoes is expected to create new economic opportunities for the local community through the creation of employment and skill enhancement. This initiative to produce Gedong Gincu mango chips also aims to empower women by involving them actively in the production process. Given that most of the local community relies on the seasonal mango harvest, their income is unstable. Therefore, mango chips can serve as an additional source of income that can improve living standards, eradicate poverty, enhance partner welfare, and develop the local economy.

This article hopes that information about the community service program, which involves training in utilizing surplus mangoes to make mango chips, will be widely disseminated and inspire others to undertake similar steps in addressing economic and environmental issues in their areas.

METHOD

The Community Service Program (PKM) was conducted in Cirendang Hamlet, Jembarwangi Village, Tomo District, Sumedang Regency, West Java, over two days from Thursday, June 21, 2024, starting at 06:00, to Friday, June 22, 2024. The activities were attended by participants from Jembarwangi Village to enhance their understanding of mango chip-making techniques, cover the entire process from selecting the right mangoes to the final stages of processing and packaging. Figure 4 shows the method for implementing community service as a whole. In this article, the author explains the implementation from the initial introduction of the program to training in making Gedong Gincu mango chips. The methods used at the beginning of this activity included several approaches. The first

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stage was a direct demonstration of making the chips. The second stage involved practical training in mango chip production. The third and final stage was an interactive discussion with all participants.

Direct Demonstration of Mango Chip Making

In the first stage, the lecturers and students conducted a direct demonstration of the entire process of making Gedong Gincu mango chips. The Mukti Farmer Group (Gapoktan Mukti) was given the opportunity to observe firsthand how to select the right mangoes, use the correct slicing techniques, dry the chips, and fry and package them to meet quality standards.

Practical Training in Mango Chip Production

Participants were divided into small groups for hands-on practice in the second stage. Each group was provided with the raw materials and equipment to produce mango chips independently. Supervisors offered guidance and oversight throughout the process, ensuring that every participant understood and could apply the machines that had been taught. This practical training aimed to reinforce the participants' skills in independently producing mango chips.

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Source: Document PKM (2024)

Figure 4. Methods of Implementing the Overall PKM Activity

Interactive Discussion

The final stage was an interactive discussion with all participants. During this session, participants were given the opportunity to ask questions, share experiences, and discuss challenges they encountered during the training. The discussion was facilitated by the instructors and the PKM team, who provided practical solutions and tips. This session also assessed the participants' understanding and ensured they were ready to produce mango chips independently after the activity concluded.

Through this structured approach, the PKM activity aims to provide practical and applicable knowledge and skills to the Jembarwangi Village, Tomo District, Sumedang

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community, enabling them to improve their family economy through producing and selling Gedong Gincu mango chips.

RESULTS AND DISCUSSION

The training on utilizing surplus mangoes for making chips to boost family income in Jembarwangi Village was well-received by the local community. The village officials responded positively, showing support for the idea of turning surplus Gedong Gincu mangoes into chips. This initiative received full backing from the village authorities, who issued a formal decree to the Jembar Motekar Joint Business Group in Jembarwangi Village, Tomo District.

Table 1
Management of the Jembar Motekar Joint Business Group
Jembarwangi Village, Tomo District

No	Name	Address	Position In The Group
1	ENENG ROHANAH	Dsn.Cirendang Rt 07/03	Chairman
2	TITA KUSMINAR	Dsn.Cirendang Rt 02/02	Sekretary
3	YUSIH	Dsn.Cirendang Rt 08/04	Treasurer
4	NINING NINGRUM	Dsn.Cirendang Rt 01/02	Member
5	ENI SURYANI	Dsn.Cirendang Rt 06/03	Member
6	ELAH	Dsn.Cibengkung Rt 03/01	Member
7	ERNA	Dsn.Cibengkung Rt 04/01	Member
8	LINA WATI	Dsn.Cibengkung Rt 01/01	Member
9	CICIH	Dsn.Cibengkung Rt 01/01	Member
10	EPI NETI GUNIWATI	Dsn.Cibengkung Rt 01/01	Member

Source: Dokumen PKM (2024)

A live demonstration of mango chip-making techniques was actively conducted in the community. This demonstration aimed to provide residents with a practical understanding of how to process mangoes into high-quality chips. It included hands-on training on the entire chip-making process, from selecting the right mangoes to final processing and packaging.

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Source: Dokumen PKM (2024)
Figure 5. Pembukaan Kegiatan Pembuatan Kripik Mangga

In the initial phase, participants were taught how to choose Gedong Gincu mangoes suitable for chip production, including identifying mangoes with the best quality even if they do not meet export or local market standards. Subsequently, the mango processing steps were explained in detail, covering peeling, slicing, drying, and frying using methods that preserve the natural taste and texture of the mango.

Source: Document PKM (2024)
Figure 6. A Live Demonstration Of Mango Chip-Making Technique

A critical aspect of this workshop was the demonstration of the necessary equipment for making mango chips. Participants were provided with explanations and hands-on practice on how to use tools such as mango slicers, drying machines, and vacuum sealers. The demonstration aimed to ensure that each participant could operate the equipment correctly and efficiently to produce high-quality mango chips. The next phase involved practical training covering the entire production process, from selecting mangoes to processing and packaging the final product. The third phase was an interactive discussion that allowed residents to share their experiences and ask questions about various technical and non-technical aspects related to mango chip production. This discussion also provided an opportunity for residents to present ideas and suggestions to improve the production process.

The training aimed to impart the necessary knowledge and skills for the community to independently produce mango chips. Furthermore, the activity sought to raise awareness among residents about the importance of innovation in addressing economic and environmental challenges in their village. Therefore, the success of this program relies not only on the technical abilities of the residents in producing mango chips but also on their shift in attitude and mindset towards sustainable use of local resources.

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Source: Document PKM (2024)

Figure 7. Direct Practice Activities and Questions and Answers

Source: Document PKM (2024)

Figure 8. Diskusi Interaktif

In line with concrete efforts to achieve the targets of the Sustainable Development Goals (SDGs) (Bappenas, 2023). Indonesia's commitment to achieving the SDGs is not only about fulfilling global agreements but also about realizing Indonesia's aspirations to improve the welfare of its people. (Bappenas, 2024). Sustainable Development, especially in improving the quality of life of the community, reducing poverty, and strengthening women's empowerment (Kutawaluya & Karawang, 2023). By utilizing the surplus of

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Gedong Gincu mangoes, it is hoped that new economic opportunities will be created for the local community through the creation of new jobs and the enhancement of skills.

CONCLUSION

The community service program's comprehensive assistance covers the production of mango chips, the formulation of marketing plans, product branding development, social media promotion, and product distribution arrangements. With a well-crafted marketing strategy, it is hoped that Gedong Gincu mango chips will be able to compete in both local and national markets, thereby positively impacting the economy of Jembarwangi Village. The local government and the residents of Jembarwangi Village have warmly welcomed the 2024 PKM Bima Dikti Grant program. Continuous support from the university and the 2024 PKM Bima Dikti Grant program also includes marketing aspects. With a strong network of partnerships, it is expected that the mango chip products from Jembarwangi Village will gain easier market acceptance, significantly contributing to the village's economy. Support from various entities, including universities, government, and the private sector, is essential to achieving this goal. Through strong cooperation and commitment, this program is expected to provide a sustainable positive impact for the community of Jembarwangi Village and contribute to sustainable economic development in Indonesia.

In the long term, this program also aims to create economic independence for the residents of Jembarwangi Village. With the skills and knowledge acquired from the training, along with continuous support, it is anticipated that villagers will be able to independently develop the mango chip business. This independence will not only increase household incomes but also strengthen the local economy. Additionally, the success of this program can serve as an example for other villages facing similar issues, thus inspiring and encouraging the development of local resource-based enterprises in various regions.

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