

Implementation of a Modern Simping Press Machine to Enhance Product Value in the Kelompok Wanita Tani Bunga Tanjung, Tanjungsari Village, Purwakarta Regency

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ABSTRACT

This community service initiative was designed to enhance the production efficiency and marketing capacity of simping products developed by the Women Farmers Group (Kelompok Wanita Tani, KWT) Bunga Tanjung in Tanjungsari Village, Purwakarta. The program employed a participatory action research approach. The main intervention involved the introduction of a modern simping press machine featuring an ergonomic design and a dual-heating system, which allows for faster, more efficient production with consistent baking quality. Additionally, the team developed a comprehensive handbook that includes operational guidelines for the machine, formulations for new flavor variants, and digital marketing strategies. The results demonstrated that the implementation of this technology significantly improved both the productivity and quality of simping while reducing the physical workload of the participating members. The strong enthusiasm and positive responses from KWT members indicate that this appropriate technology effectively addressed their needs. Overall, the program contributes to strengthening the village-based creative economy through local culinary innovation and advancing women's empowerment within micro, small, and medium enterprises (MSMEs).

Keywords: modern simping press machine, participatory action research, Kelompok Wanita Tani

1. INTRODUCTION

Tanjungsari Village is located 13 km from the UPI campus in Purwakarta, with the majority of its residents working in agriculture and plantation sectors. The village envisions the realization of a community with high-quality, healthy, and strong-character human resources supported by quality education. The main partner of this community service program is Kelompok Wanita Tani (KWT) Bunga Tanjung, which is based in Tanjungsari Village. The main product of this KWT is simping. Simping is a traditional snack from Purwakarta Regency, made from a mixture of glutinous rice, tapioca flour, and wheat flour, traditionally processed into thin, crispy crackers with a distinctive taste and texture **(Rifa'i & Izzati, 2022)**. Historically, simping was originally served exclusively to the nobility in the 19th century and often presented at important occasions such as state receptions and ritual ceremonies **(Fanasafa, 2022)**.

KWT Bunga Tanjung was initially established in May 2017 by the Tanjungsari Village BLK to process agricultural products such as ginger and turmeric into powder **(Tanjungsari, 2023)**. Over time, KWT Bunga Tanjung shifted its focus to developing local culinary products, particularly simping. Although the processing of ginger and turmeric has been discontinued, the name KWT Bunga Tanjung remains in use. The group was officially legalized on February 1, 2024, through a decree issued by the head of Tanjungsari Village.

On March 24, 2025, the PKM team conducted a visit to Tanjungsari Village to meet with the village authorities and representatives of KWT Bunga Tanjung. Both parties warmly welcomed our intention to collaborate in this PKM activity. Documentation of the team's visit to the partner location is presented in Figure 1.



Figure 1. Visit of the PKM team to the Tanjungsari Village Office and KWT Bunga Tanjung

From the visit, it was found that production activities are routinely carried out every Tuesday, Wednesday, and Thursday, with an average production volume of 6–7.5 kg per day, starting from 9 a.m. to 3 p.m. During the month of Ramadan, demand increases and production is conducted every day except Monday. The manual production process of simping still presents several challenges. Figure 2 shows the workspace and conventional production tools used at KWT Bunga Tanjung. The pressing and flipping of simping are done one by one, resulting in uneven levels of doneness. As shown in Figure 2, a single stove with two burners is used to heat seven molds simultaneously, requiring the producers to carefully check the doneness of each simping individually. In addition, physical fatigue often occurs due to the use of non-ergonomic equipment, such as plastic chairs without backrests. Time efficiency and production quality therefore remain significant challenges, particularly when raw material prices, such as coconut, rise sharply during festive seasons.



Figure 2. Workspace and conventional simping production tools at KWT Bunga Tanjung

In addition, the current product variants are still limited to three types previously mentioned, namely kencur flavor, cheese flavor, and the original (glutinous rice). In fact, there is considerable potential to develop new and more diverse flavors that are more appealing to the market. With the financial constraints faced by KWT Bunga Tanjung, the modernization of production equipment and the strengthening of digital marketing have become urgent needs to enhance the added value and competitiveness of their simping products.

This community service activity aims to improve both the production and marketing aspects of simping managed by Kelompok Wanita Tani (KWT) Bunga Tanjung in Tanjungsari Village. In terms of production, the team will implement a modern simping press machine designed with ergonomic and practical principles to improve work efficiency and product quality. Similar simping press machines have previously been developed by two researchers (**Agustiawan & Nuradi, 2021; Permana, Wiyono, Syamsiyah, & Renaldi, 2022**). However, the system designed by the authors incorporates ergonomic considerations and feedback from simping artisans. The system remains mechanical in nature to reduce electricity consumption. Meanwhile, in terms of marketing, the partners will receive training and guidance in utilizing digital platforms such as e-commerce and social media to expand their market reach.

This activity supports the achievement of the Sustainable Development Goals (SDGs), particularly Goal 1 (No Poverty), Goal 5 (Gender Equality), and Goal 8 (Decent Work and Economic Growth). Since the majority of simping producers are women, the improvement of production and marketing capacity will directly impact the welfare of their families and communities.

2. METHODS

This community service activity employs a Participatory Action Research (PAR) approach, which is oriented toward community empowerment through the direct development and mobilization of knowledge and technology within the partner environment (**Cornish et al., 2023**). This approach aims to ensure that the community does not merely serve as the object of activities but also acts as the main agent of change (**Afandi, 2022; Fakoya et al., 2022; Zakaria, Muttaqin, Suranegara, Irawan, & Venica, 2022; Zakaria et al., 2023**). In practice, the lecturers and students serve as facilitators of empowerment rather than as the primary implementers. It is expected that, through the active involvement of partners in all stages of the activity, community independence will be fostered, reducing reliance on external parties. Such independence is anticipated to form the foundation for sustainable social transformation.

In the context of Kelompok Wanita Tani (KWT) Bunga Tanjung, the PAR approach is implemented to enhance the quality and efficiency of simping production, improve work comfort, and strengthen digital marketing capabilities. Through training, hands-on practice, and joint reflection, partners are expected to acquire new competencies that they can independently apply after the program ends. Thus, this activity does not only produce outputs such as tools or training sessions but also builds the internal capacity of partners to utilize technology, apply knowledge, and ensure the sustainability of their business autonomously.

As part of the activities, training sessions will be provided on digital marketing practices, exploration of new simping flavor variants, and the use of modern simping press machine. The training will consist not only of theoretical material but also practical application by partners in 2–3 sessions. To support this, the team has developed a handbook containing a manual guide for the system, digital marketing strategies, and recipes for new simping variants by KWT Bunga Tanjung. Throughout the process, lecturers and students will continue to provide mentoring and evaluation to ensure the targeted improvements in production and marketing are achieved. The stages of the community service activities for empowering KWT Bunga Tanjung are presented in Figure 3.



Figure 3. Stages of community service activities for KWT Bunga Tanjung

The implementation method of this community service activity adopts a participatory action research that actively involves partners at every stage. The first stage is problem and potential identification, where the team and partners mapped the main challenges faced by KWT Bunga Tanjung, such as the limitations of conventional production tools, lack of ergonomic comfort, restricted flavor variations, and simple word-of-mouth marketing strategies.

The second stage is system design and preparation of socialization materials. At this stage, the team designed and tested the performance of a modern simping press machine as an appropriate technology to improve production efficiency. In addition, a handbook was developed containing guidelines for operating the machine, digital marketing strategies, and exploration of new flavor variants as the foundation for training activities.

The third stage consists of socialization, demonstration, and training. Members of KWT were trained directly in using the system, developing new simping flavors, and implementing digital marketing strategies through social media and e-commerce platforms. This process employed a hands-on approach to ensure that skills could be mastered by the partners independently.

The fourth stage is monitoring and evaluation, which includes tracking the use of the system, assessing the effectiveness of marketing strategies, and preparing activity reports. This stage ensures the sustainability of the program and provides opportunities for improvement in both production quality and marketing.

3. RESULTS AND DISCUSSION

3.1 Design of a Modern Siping Press Machine

This modern siping press machine is designed to improve both efficiency and comfort in the production process. With an ergonomic and practical approach, the machine enables users to press siping quickly and evenly without the need to manually flip the batter. The system is equipped with two active heating surfaces (top and bottom) that operate simultaneously through a rotary mechanism. Within a single full rotation, both sides of the siping are perfectly cooked with uniform doneness. This design not only reduces work fatigue but also increases daily production capacity. The system design process is illustrated in Figure 4.



Figure 4. Design process of the modern siping press machine

3.2 Development of a Handbook for the Modern Siping Press Machine

This handbook is prepared as a practical guide for members of Kelompok Wanita Tani (KWT) Bunga Tanjung in operating and utilizing the modern siping press machine. The system is an innovative modern siping press designed to improve efficiency, comfort, and product quality. With its ergonomic design and dual-heating system, the machine enables the siping production process to be faster, more even, and eliminates the need for manual flipping, which has long been difficult and physically exhausting.

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In addition to focusing on the technical aspects of operation, this handbook also provides instructions on machine maintenance, workplace safety standards, and practical tips for maintaining consistent production quality. Furthermore, the handbook is complemented with additional materials on flavor innovation and basic digital marketing strategies, enabling partners to develop simping products not only in terms of quantity but also in terms of quality and competitiveness in the market.

3.2 Socialization and Demonstration Activities of the System Usage

This community service activity was held on Saturday, August 9, 2025, at the Tanjungsari Village meeting hall. The agenda of the activity is presented in Table 1.

Table 1. Agenda of the Community Service Activity

No	Time	Activities	PIC
1	09.00 - 09.05	Opening	MC
2	09.05 - 09.10	Singing of the Indonesian National Anthem (Indonesia Raya)	Together
3	09.10 - 09.15	Recitation of the Holy Qur'an	Diky Zakaria, S. Pd., M.T.
4	09.15 - 09.20	Remarks by the Head of Tanjungsari Village	
5	09.20 - 09.25	Remarks by the PKM Dikti Implementation Team and Official Opening of the Activity	Prof. Dr. Sri Subekti, M.Pd.
6	09.25 - 10.25	Socialization and Demonstration of the Modern Simping Press Machine	PKM team
7	10.25 - 11.50	Joint Cooking of Simping Using the Modern Press Machine	PKM team
8	11.50 - 11.55	Symbolic Handover of the System to KWT Bunga Tanjung	Dini Fauziah, M.T.
9	11.55 - 12.00	Closing	MC

Based on Table 1, the activity began at 9 a.m. It was opened with an introductory session followed by welcoming remarks. A total of 30 participants attended, consisting of members of Kelompok Wanita Tani (KWT), village officials, and women from the Family Welfare Movement (PKK). The materials delivered included the socialization and demonstration of the modern simping press machine, guidance on its maintenance, joint simping cooking using the system, and the symbolic handover of the system. Documentation of the activity is shown in Figure 5.

Figure 5 presents the documentation of the community service activity. Participants engaged in a joint simping cooking session using the modern simping press machine that had been developed. Qualitatively, the partners expressed their satisfaction with the system. They reported that the modern simping press machine improved the quality of the simping produced due to more uniform doneness and a faster production process. In addition, the system is more ergonomic compared to the conventional simping press previously used. The system is capable of pressing 48 simping in a single rotation cycle, taking approximately two minutes.

4. CONCLUSION

Beyond production aspects, the preparation of a handbook containing instructions for operation, maintenance, flavor innovation, and digital marketing provides practical guidance for partners to develop their business independently. The socialization and training activities demonstrated strong enthusiasm from KWT members, who felt greatly assisted by this innovation.

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continued use of this system and enhanced digital capacity, KWT Bunga Tanjung has the potential to expand its market reach and sustainably improve the welfare of its members.

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