

Enhancing Productivity of UD Rahayu Food by Symmetrical Tofu Cutter Utilization

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ABSTRACT

UD. Rahayu Food was one of pioneer on the special tofu production with soft texture called "tahu susu". During pandemic of Covid-19, the productivity of UD. Rahayu Food was decreased and it had an impact on their sales. Optimization of its production process by technology application would be one of the solutions for UD. Rahayu Food. The aims of this community service at UD. Rahayu Food is upgrading their productivity rate by production tools improvement. The production tool that was developed on this activity is symmetrical tofu cutter. This equipment was utilized for cutting of tofu symmetrically before being processed into "tahu susu". Moreover, this cutter could speed up the slicing step process and their product quantity would be raised. Hopefully, provision of this symmetrical cutting tool could increase the income of UD. Rahayu Food during Pandemic Covid-19.

Keywords: Cutter, symmetric, tahu susu, tofu, UD. Rahayu Food

Introduction

Tofu is the most popular processed food in Indonesia and being consumed by Indonesian people for centuries ago (Santoso, 1993). Generally, tofu was made from soybean extract that has coagulated with acid, calcium ion, or another coagulant (Lies, 2005). Along with the food technology development, tofu can be processed with the immersion of milk or other ingredients to be "tahu susu" (Susilorini & Sawitri, 2006). "Tahu susu" is one of the dairy products that might be developed with feedstock diversification into other processing food like "kerupuk tahu susu" and "keju muda" (Nurhidajah & Suyanto, 2012). The principle of "tahu susu" preparation is the immersion of tofu in a container of milk or seasoning solution (Sarwono & Saragih, 2004). The organoleptic test result of "tahu susu" shows a soft texture and brings out the savory taste although there is no shape and color transformation (Handoko, 1998). Therefore, "tahu susu" becomes one of the favorite foods in society lately.

UD. Rahayu Food is one of "tahu susu" manufacturing shop that located at Keplaksari village, Peterongan, Jombang, East Java. Their business is developed by improvement of tofu quality with seasoning addition inside tofu. The texture is soft on the inside and crunchy on the outside, making consumers addicted to consuming "tahu susu". "Tahu susu" also has a permit from Dinas Kesehatan Kabupaten Jombang. There are some flavors of "tahu susu" that were made to fulfill the market needs, such as original, cheese, and spicy. The price of "tahu susu" is the same for all flavors, around ten thousand rupiahs (IDR.10.000, -) per box or 50 pieces of tofu and two thousand rupiahs (IDR.2.000, -) per pack or 10 pieces of tofu. The owner (Mrs. Rahayu) said that the production of "tahu susu" does not come from a mixture of real milk but soy juice and some spices as a seasoning mixture of tofu.

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Before the pandemic of Covid-19, production, sales, and distribution of “tahu susu” had also penetrated outside cities such as Tangerang, Solo, and Bali. However, UD. Rahayu Food began to face many challenges when many traders began to imitate their business. Tofu sales competition starts from providing lower sales prices, marketing “tahu susu” on the online platform, and other services. This is what lies behind the need for optimizing UKM UD. Rahayu Food to be able to maintain its business amidst the emergence of new challenges.

One improvement that would be implemented at UD. Rahayu Food is the optimization of its production process using applicative technology called Teknologi Tepat Guna (TTG). An efficient production process not only cuts human resources operational costs but can also cut “tahu susu” manufacturing time. Therefore, this community service was given to UKM UD. Rahayu Food is helping to streamline the production process of “tahu susu” by providing a “tahu susu” cutting tools. This community service is organized by Universitas Pembangunan Nasional (UPN) “Veteran” Jawa Timur through PIKAT (Pemanfaatan IPTEK Bagi Masyarakat) scheme. With this service, it is hoped that UKM UD. Rahayu Food can shorten its production process and increase the sales of its “tahu susu”.

Material and Methods

The method of implementing this community service program is carried out using several approaches. The chosen approach is adjusted to the output targets as aforementioned. The implementation method is designed to overcome two points of partner problems, namely improving the production system and increasing the marketing of UD. Rahayu Food products by e-commerce platform. The solution that was given by UPN team is to improve “tahu susu” cutting system at UD. Rahayu Food.

The tofu cutter was designed (figure 1) to simplify of tofu slicing process and increase its symmetrical form during cutting. Then, socialization and training on the more effective and efficient use of tofu cutting tools were provided by UPN team. Presenting and providing training on procedures for using tofu slicers was also delivered to UD. Rahayu Food. In this activity, UD. Rahayu Food would attend the training and tofu cutting tool would be discussed with UPN Team as a designer. For evaluation, a questionnaire also is prepared for UD. Rahayu Food ensures socialization and training meet the requirement of the partner. The output of this activity is the enhancement of knowledge about the utilization of symmetrical tofu cutting tools.



Figure 1. Tofu cutter tool design

Results and Discussion

This “tahu susu” is produced at Mrs. Rahayu's house, by producing according to the quantity ordered. The production equipment is still simple and has not been supported by modern mechanical equipment. The tofu raw materials used are obtained from the local tofu industry. The tofu is then cut into pieces according to size with a knife and then soaked for approximately 4 hours with some special spices created by Mrs. Rahayu herself. In the production process, there is a tofu cutting process from large to small sizes. So far, this slicing is done with an ordinary knife so it takes quite a long time.



Figure 2. Cutting process using a knife

Increasing the production of a business, especially in the food sector, can be done by improving the equipment of production. One of the activities developed in the PIKAT program is the manufacturing of asymmetrical “tahu susu” cutter. This tool will be used on “tahu susu” feedstock, that is tofu. This tofu will be cut into small symmetrical pieces before being processed into “tahu susu”. In the previous production process, the tofu was cut with a kitchen knife, this caused the results or size of the tofu to be non-uniform and took a long time.



Figure 3. Utilization of symmetrical cutter

The purpose of making this tofu cutting tool is so that the raw material of “tahu susu” is symmetrical, that is, it has the same size. The procedure for using this tool is also quite simple and easy. The tofu material is placed on a board or flat place, then this cutting tool is placed on top of the tofu, then pressed until the tofu is cut to size. After that, the tofu that has been cut is placed on a tray or container for the process of soaking it with water and the typical spices of “tahu susu”. After 4-8 hours of immersion, “tahu susu” should be drained and cooled in the refrigerator for about a day. On the next day, “tahu susu” can be sold or cooked.



Figure 4. The difference of tofu slicing results

Conclusion

The community service activity via Pemanfaatan IPTEK Bagi Masyarakat (PIKAT) was held at UD. Rahayu Food to increase productivity and sales of “tahu susu” products. Teknologi Tepat Guna (TTG) that was delivered is the use of symmetrical tofu cutting tools to increase the efficiency and effectiveness of the “tahu susu” production process. In the end, this activity is certainly expected to boost sales of “tahu susu” UD. Rahayu Food during the Covid-19 pandemic.

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