

Enhancing Awareness of Food Quality and Safety Standards Among MSME Processed Food Producers in Pondoksalam, Purwakarta

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Abstract

In recent decades, there has been growing awareness among Micro, Small, and Medium Enterprises (MSMEs) regarding the importance of quality in the processed food products they manufacture. This awareness is a key driver in increasing product value, which in turn positively impacts business turnover. This community service program (PKM) aimed to identify the level of understanding among MSME actors in Pondoksalam Subdistrict, Purwakarta Regency, concerning the importance of product quality and food safety in their processed products. Interviews conducted with 15 MSME respondents revealed that they had not yet conducted quality testing on their products nor included shelf-life information on their packaging. During the implementation of the PKM program, we conducted educational sessions on quality assurance and food safety in accordance with the Indonesian National Standard (SNI), and provided mentoring and facilitation in product analysis and shelf-life determination. Sample products included local snacks such as banana chips, sale pisang, pungpa, basreng, and ladu, all produced by MSMEs in Tanjungsari Village, Pondoksalam Subdistrict, Purwakarta. The outcomes of the program indicated an improvement in participants' knowledge regarding the importance of adhering to quality and safety standards in food production. MSME actors also received official product quality analysis certificates, which can now be included on their product packaging. It is expected that this program will yield a positive impact by encouraging MSME producers to include key product information—such as nutritional value and shelf life—on their packaging. Consequently, the processed food products from Tanjungsari Village will be better positioned to compete in formal retail outlets, supermarkets, and international markets, ultimately increasing the economic income of local MSME actors.

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INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) play a vital role in strengthening the national economy through job creation and the development of local industries. One of the key sectors driven by MSMEs is the production of processed food products, which have the potential to be competitive both locally and globally. However, many MSME food products still lack compliance with food quality and safety standards and do not include complete labeling information as required by regulations, thereby limiting their market reach (Razikan, 2021).

Over the past few decades, the demand for processed food products has continued to rise, followed by increased consumer awareness regarding food quality. Modern consumers tend to be more selective, requiring food products that

are not only safe and nutritious but also meet quality standards. Product quality is one of the main factors influencing consumer purchasing decisions, particularly for food items (Permana, 2017; Mukaromah, 2023). Quality assessment commonly involves proximate analysis, including carbohydrate, protein, fat, and fiber content, as well as microbiological testing, moisture content, ash content, and heavy metal residues in accordance with Indonesian National Standards (SNI).

According to Government Regulation No. 28 of 2004, food quality is determined based on food safety, nutritional content, and trade standards. Food labeling serves as a key communication tool between producers and consumers, containing important product information such as

composition, nutritional value, expiration date, and distribution permits (Fransisca et al., 2016; Junaidi, 2017). Accurate labeling helps build consumer trust and enhances marketability.

Despite the importance of quality assurance and labeling, many MSMEs are still unable to perform food testing due to limited financial capacity and technical knowledge. The National Agency of Drug and Food Control (BPOM) has reported a low level of understanding among MSMEs regarding food safety practices (BPOM, 2019). In response, several regulations—such as BPOM Regulation No. 31 of 2018 and No. 16 of 2020—have been issued to ensure that even MSME food products include accurate nutritional information and meet safety standards.

This community service program aims to increase awareness and technical capacity of MSME food producers in Pondoksalam Subdistrict, Purwakarta Regency in implementing food quality assurance and safety. The program involved outreach activities, mentoring, product quality analysis, and shelf-life determination for selected food products, including banana chips, sale pisang, pungpa, basreng, and ladu, produced by MSMEs in Tanjungsari Village.

The program provided MSME participants with certificates of product quality analysis, enabling them to revise their product labels to comply with BPOM regulations. It is expected that this initiative will improve product competitiveness in wider markets, including modern retail and export channels, while increasing consumer confidence and the economic resilience of local MSMEs.

METHOD

This program was conducted with MSME actors in Pondoksalam Subdistrict, Purwakarta Regency. The community involved in this program consisted of 20 MSMEs engaged in processed food production. The MSMEs selected for direct assistance were from Tanjungsari Village, producing processed food products under the brand name "SR." The product samples included: 2 variants of banana chips, 2 variants of banana sale, 2 variants of basreng, pungpa, and ladu.

The community service activities were carried out in several stages, starting with a socialization program on food quality and safety, followed by laboratory analysis and technical assistance. The implementation method of this program is as follows:

1. Socialization on Food Safety and Sampling

The initial socialization involved the distribution of questionnaires and interviews with MSME owners regarding the importance of quality analysis, shelf life, and food safety. The final stage of the socialization included presenting the analysis results and discussing appropriate packaging in accordance with BPOM Regulation No. 31 of 2018 concerning Processed Food Labels.

The data collection methods used in this program were:

(a) Field Observation

Field observation was employed to directly observe and record phenomena or events related to MSME activities. This observation aimed to assess the potential of the MSMEs and identify issues related to quality that had been and were being addressed to improve the products.

(b) In-Depth Interviews

In-depth interviews were conducted to obtain detailed information from MSME owners, employees, village officials, and the local community. This method aimed to gather insights regarding support for improving product quality and the challenges faced by MSMEs.

2. Laboratory Analysis

Samples of processed food products from MSMEs in Tanjungsari Village—banana chips, sale pisang, pungpa, basreng, and ladu—were analyzed at the Laboratory of the Indonesian School of Pharmacy. The analyses included:

a. Proximate Analysis

This analysis tested the levels of protein, carbohydrates, fat, and fiber (BSN SNI, 2008).

b. SNI Quality Standards Testing

Standard quality testing in accordance with the Indonesian National Standards (SNI) was performed, including tests for moisture content, ash content, heavy metals, and fungal and yeast plate counts. These tests were adjusted to the specific SNI requirements for each product (Astawan, 2021).

c. Shelf Life Testing

Shelf life testing evaluated the period during which the product remains suitable for consumption, from production through distribution to consumption, ensuring that the product meets the promised quality.

3. Technical Assistance

Technical assistance was provided in the form of workshops aimed at improving product quality. MSME owners were required to submit product samples for quality analysis in the laboratory. Product collection was facilitated in cooperation with the Pondoksalam Subdistrict authorities, who serve as MSME mentors.

4. Evaluation and Sustainability

This program primarily took place in the laboratory for product quality analysis and shelf life testing, with ongoing monitoring of the activity's progress. The next phase involves providing counseling and support to improve the quality of products that do not meet SNI standards. For these MSMEs, further assistance will be provided to refine the production process until the products meet the required standards. The final evaluation of the program includes market reach monitoring of the analyzed products, in cooperation with the Subdistrict authorities (Mamuajja, 2016).

5. Team Roles

The team consisted of faculty members specializing in pharmacology and food chemistry. Each team member was responsible for conducting at least one type of laboratory test. Technical assistance and counseling were primarily carried out by the food chemistry experts. In the implementation process, students were involved in both the analysis and the counseling activities.

DISCUSSION

1. Results of Socialization on Quality and Food Safety Analysis

The implementation of the PKM program began with a socialization event for MSME actors in Pondoksalam Subdistrict, Purwakarta, held on September 11, 2023. In addition to educating participants on food safety, a questionnaire was distributed to assess the understanding of food quality and safety. Sample collection was conducted from one MSME actor in Tanjungsari Village. The results of the questionnaire revealed the profile of MSME actors, as shown in the graphs below (Figure 1 to Figure 4).

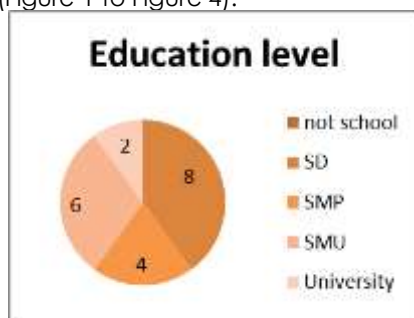


Figure 1. Education level of MSME actors

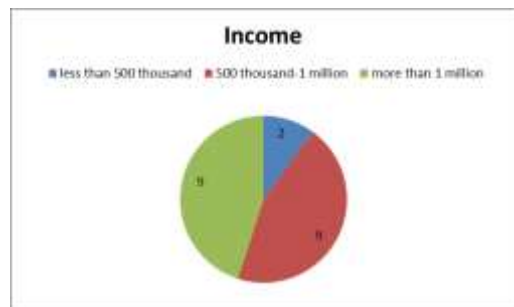


Figure 2. Income of MSME Actors per month



Figure 3. Marketing location of MSME products

The results indicated that the educational background of MSME actors in Pondoksalam Subdistrict is as follows: 40% have completed elementary school, 20% attended junior high school, 30% have completed senior high school, and 10% hold a university degree. This data correlates with the creativity and innovation in food processing, which also affects marketing and the income of the MSME actors. With enhanced knowledge, MSME actors can expand their market reach by utilizing modern technology, enabling online sales. This challenge can be addressed through training in online marketing methods, creating attractive packaging, and proper food processing techniques to ensure product quality. Regarding product licensing, 90% of MSME actors in Pondoksalam Subdistrict have obtained Food Industry Household Business (PIRT) certification.

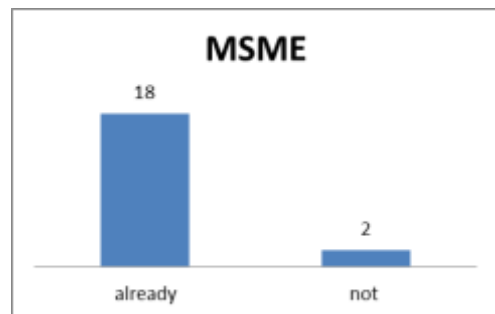


Figure 4. PIRT Status of MSME Actors

The results of the questionnaire on the socialization of Food Quality and Safety Analysis show an improvement in the understanding of MSME actors regarding food quality. As shown in Table 1, there is an increase in the understanding of contamination factors that may affect food quality. The socialization provided MSME actors with knowledge on the importance of shelf life, minimizing microbial contamination, required information on packaging, suitable packaging types, and the significance of halal labeling. Halal-certified products are guaranteed to be of good quality, but not all good products are necessarily halal.

Table 1. MSME Actors' Understanding Before and After the Socialization on Food Quality and Safety Analysis.

No	Statement	Pre-test	Pos-test
1.	Function of Food Production Licensing	60%	90%
2.	Microbial Hazards in Food	60%	90%
3.	Methods to Minimize Microbial Contamination	25%	50%
4.	Types of Food Quality Testing	50%	70%
5.	Microbial Contamination in Food	30%	60%
6.	Characteristics of Unsellable Products	60%	80%
7.	Knowledge of Shelf Life	50%	80%
8.	Information on Packaging	50%	100%
9.	Impact of Packaging on Sales	70%	100%

2. Laboratory Analysis Results

Food quality is a significant concern for consumers, with approximately 95% of the 50 respondents surveyed randomly from various areas around Bandung and Purwakarta expressing interest in food quality. Numerous factors can influence the quality of processed food products, such as ingredients, moisture content, and nutritional composition. To assess the quality of food products, particularly evaluating nutritional content and potential contaminants, comprehensive testing is required, which can only be conducted in a laboratory.

From a practical standpoint, this PKM program provides valuable information to facilitate the required testing, with all costs fully covered by STFI. It is expected that with the results of the food quality analysis, MSME actors will be able to include nutritional content on their packaging, thereby increasing consumer trust and expanding their market reach, which in turn can improve the income of MSME actors. The analysis results for

eight food samples were presented to MSME actors on December 11, 2023, in the form of a Certificate of Analysis (COA) at the Tanjungsari Village Head's Office, Pondokslam Subdistrict, attended by the Subdistrict Head, his team, and MSME actors.

3. Technical Assistance and Ongoing Evaluation

Technical assistance was provided continuously through training aimed at improving the quality of processed food products from MSMEs. This included training on packaging methods that comply with BPOM regulations, as well as guidance for products that did not meet SNI standards based on the analysis results. The program emphasizes the importance of sustainable quality improvements and assisting MSMEs in meeting required food safety standards.

4. Activity Documentation



Gambar 5. Sosialisasi, wawancara, pelatihan, dan pengambilan sampel produk makanan olahan UMKM

CONCLUSION

Overall, the STFI PKM activities for the year 2023 have been successfully carried out as planned

over the course of two semesters. The food products that underwent quality testing were from the MSMEs in Tanjungsari Village, Pondoksalam Subdistrict, which included snacks under the brand "SR," consisting of Banana Chips, Banana Sale, Basreng, Pungpa, and Ladu. The analysis results indicate that all products met the SNI standards, and their shelf life has been determined. Through this program, the improvement in product quality is expected to contribute to the economic benefits of MSME actors in Pondoksalam Subdistrict, Purwakarta. Further guidance and support are necessary to ensure that products meeting SNI standards can compete in official stores and global markets. Additionally, training on marketing strategies and support for large-scale production should be provided.

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