EVALUATION OF THE APPLICATION OF FOOD SAFETY FOR THE HOUSEHOLD INDUSTRY "BREAD ANNI" KARAWANG, WEST JAVA IN THE NEW NORMAL ERA

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ABSTRACT
Maintaining the movement of food along the food chain is an important function that all stakeholders along the food chain need to contribute. Food safety is an important component of any food business in ensuring a food safety culture. One way to attract consumers' attention is to ensure that the food produced is safe for health with a guarantee of cleanliness. One of the food businesses that have promising prospects for their owners is in the bakery sector. The purpose of this study is to identify the application of a food safety system with the GMP system in the Home Industry (IRT) in Karawang. The place where this research was conducted was one of the Karawang home industries. This research was conducted using the field observation method, the research was conducted in August 2022. Data collection, namely primary data obtained by observation and interviews. Respondents were determined by purposive sampling. The data analysis method used is descriptive analysis. The descriptive analysis in this study includes evaluating the condition of each of the basic GMP requirements. The results of research on food safety in one of the Karawang home industries, namely Roti Anni, found that the application of aspects of food safety according to the GMP system from 13 aspects 1 aspect was very fulfilling, 9 aspects were categorized as fulfilling, 2 aspects were sufficient and 1 aspect was not fulfilled, namely in laboratory checking according to CPPOB.

Keywords: Food Safety, GMP, IRT

INTRODUCTION
In the normal New Era, demands to restart various social and economic activities can be carried out, but with health standards, work facilities and public infrastructure that allow humans to live side by side with Covid-19 which has not yet gone away. In the new normal era, many catering businesses have reopened their businesses. The catering business can become a place of transmission of Covid-19 because it has a fairly long chain starting from producers, distributors, consumers to food delivery, so food safety education is needed to stop the spread of various viruses and regain consumer confidence (1). Food industry personnel do not have the opportunity to work from home and are required to continue working in their usual workplace. Keeping all workers in the food production and supply chain healthy and safe is critical to surviving this current pandemic. Maintaining the movement of food along the food chain is an important step that all relevant stakeholders need to think about.

Food Safety Authority of Ireland (2001) Food safety training is an important component of any food business in ensuring a food safety culture. It is a legal requirement that staff involved in the food environment receive adequate training and/or be supervised according to their work
activities (2)(3). Consuming unsafe food can endanger the health and lives of consumers. However, until now the circulation of unsafe food is still a problem for Indonesia. Even though provisions regarding food safety have been regulated in the Law (UU) concerning Food and the Law concerning Health (4).

Bread is a food product made from wheat flour which is processed by baking or steaming (5). According to data from the Bakery Entrepreneurs Association (APEBI 2016), it shows that the Indonesian bakery industry grows between 10-15% per year (6). Bread is in demand by many consumers, from children to the elderly, but does not yet have food safety guarantees. Therefore, it is necessary to have a system that can guarantee and support food safety and quality assurance in the food industry, especially in MSMEs, there are several systems that can be implemented. Use to maintain food safety in SMEs that are easy to use, namely Good Manufacturing Practices (GMP) and Sanitation Standard Operating Procedure (SSOP). According to BPOM RI, efforts to control and prevent biological, physical and chemical contaminants that have detrimental effects and can even interfere with consumer health are efforts in food safety.

Anni Bread is one of the UKM businesses engaged in the food sector in the form of bread which is located in Karawang Regency, West Java. Anni Bread Factory has been established since 2000, and is one of the favorite breads of the Karawang people. During the pandemic, Anni’s bread was affected by reduced production, to maintain the quality of Anni’s bread products, the production of bread making while maintaining food safety. The problems that exist in Roti Anni are still traditional and have not yet implemented good production methods in the industry. This research is themed Food Safety Analysis for Karawang Home Industry Products in the New Normal Era. This research is themed Food Safety Analysis for Karawang Home Industry Products in the New Normal Era.

**RESEARCH METHOD**

This research was conducted in one of the Home Industries (IRT) in Karawang Regency, namely Roti Anni. This study design Observational data collection used in this study includes observation and interviews. Direct observation of the production process. This research was conducted in August-December 2022 with owners, employees and researchers as a comparison regarding observation data.

**RESULTS AND DISCUSSION**

Good quality bakery products can be assessed from the selection of quality raw materials and production processes that guarantee food safety. The application of safe production processes at every stage is necessary to produce products that are safe for consumption. In order to ensure that the products produced are safe for consumption, a food management system with basic requirements is needed, namely the application of GMP and SSOP.

According to Permenperid (2010) which has been issued by the Minister of Industry of the Republic of Indonesia namely regarding the guidelines for good Processed Food Production Methods or CPPOB Number 75/M-IND/PER/7/2017 (7) that CPPOB or what is known as GMP is a method of production which pays attention to aspects of food safety, among others by preventing contamination of processed food by biological, chemical contaminants and other
objects, killing or preventing the life of pathogenic microorganisms, controlling the production process and as a basic requirement for the application of the food processing industry. Assessment of GMP implementation is carried out by direct observation in the field and carrying out checks list of GMP aspects at Roti Anni, then a detailed recapitulation is carried out and percentages are calculated and then categorized according to CPPOB (7), namely perfect (95% - 100%), very fulfilling (90% - 94.9%), conditional (80% - 89.9%), fulfilled (60% - 79.9%), quite fulfilled (50% - 59.9%) and not fulfilled (<50%).

The results of the recapitulation are in accordance with the implementation of GMP to what actions must be taken in every aspect that occurs in storage. Data check The list was obtained from 3 sources, namely owners, employees and researchers. In table 1 it can be seen that the results of implementing GMP were carried out using a questionnaire and the data has been processed to produce a value.

<table>
<thead>
<tr>
<th>No</th>
<th>Scope</th>
<th>Assessment Results implementation of GMP (%)</th>
<th>Average %</th>
<th>Rating Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Location and environment</td>
<td>Owner 75, Employee 75, Researcher 75</td>
<td>75</td>
<td>Fulfill</td>
</tr>
<tr>
<td>2</td>
<td>Building</td>
<td>65, 60, 50</td>
<td>58,3</td>
<td>Enough</td>
</tr>
<tr>
<td>3</td>
<td>Facility sanitation</td>
<td>81, 72, 63</td>
<td>72</td>
<td>Fulfill</td>
</tr>
<tr>
<td>4</td>
<td>Production tools</td>
<td>66, 66, 50</td>
<td>61</td>
<td>Fulfill</td>
</tr>
<tr>
<td>5</td>
<td>Ingredient raw materials and materials addition</td>
<td>70, 70, 65</td>
<td>68</td>
<td>Enough</td>
</tr>
<tr>
<td>6</td>
<td>processing</td>
<td>88, 77, 66</td>
<td>77</td>
<td>Fulfill</td>
</tr>
<tr>
<td>7</td>
<td>Production end</td>
<td>75, 75, 75</td>
<td>75</td>
<td>Fulfill</td>
</tr>
<tr>
<td>8</td>
<td>Laboratory</td>
<td>0, 0, 0</td>
<td>0</td>
<td>Not fulfilled</td>
</tr>
<tr>
<td>9</td>
<td>Employee</td>
<td>83, 66, 66</td>
<td>72</td>
<td>Fulfill</td>
</tr>
<tr>
<td>10</td>
<td>Containers and packaging</td>
<td>83, 66, 50</td>
<td>66</td>
<td>Fulfill</td>
</tr>
<tr>
<td>11</td>
<td>Label</td>
<td>100, 100, 70</td>
<td>90</td>
<td>Very fulfilling</td>
</tr>
<tr>
<td>12</td>
<td>Storage</td>
<td>88, 77, 66</td>
<td>77</td>
<td>Fulfill</td>
</tr>
<tr>
<td>13</td>
<td>Maintenance</td>
<td>80, 70, 63</td>
<td>71</td>
<td>Fulfill</td>
</tr>
<tr>
<td></td>
<td>Total Implementation of GMP</td>
<td>73, 67, 54</td>
<td>61.5</td>
<td></td>
</tr>
</tbody>
</table>

Based on the results of the overall assessment carried out, different results were obtained between owners, employees and researchers. The result according to superiors is 73%; then according to researchers by 54% and employees by 67%. The results of the assessment of superiors, employees and researchers show that the application of GMP to Anni’s Roti has met (60% - 79.9%) CPPOB standards (2017). There are several aspects of GMP (Good Manufacturing Practice) where there are deviations or discrepancies between field conditions and the conditions that should be (20). UKM Roti Anni still needs to improve the field conditions by taking corrective actions to support the perfection of the implementation of the food safety management system. In the following, each aspect of GMP will be explained along with the steps for its application to Roti Anni.
1. Location and production environment

The real situation at Roti Anni related to this aspect is as follows. The road to the location is made of cement which is in good condition. The sewage water around the factory is collected in the same place as the waste from the surrounding community before being discharged into the river. The location is in the highlands, so it is free from floods. The location is between a densely populated community and enters an alley, so that only one four-wheeled vehicle can pass. The results of the assessment of this aspect obtained according to employees 75%; according to owner 75% and researcher 75%. The production site must be in a hygienic condition and in a sanitary environment, far from landfills, piles of used goods and unkempt yards (8).

2. Buildings and Facilities

The real situation at Roti Anni related to this aspect is as follows. The floor is made of ceramic both in the production room and in the office, so it is sometimes slippery in the production room. The walls are dull, the color of the paint has faded because of the dust. The ceiling is made of asbestos, and the highest floor has a tin roof, which is 3 m high from the floor. The building consists of two floors, the lower floor for production and the upper floor for finished product storage and offices. The results of the assessment on this aspect according to employees are 60%; according to owner 65% and researcher 50%. These results indicate that according to the average production facility, adequate facilities meet. The Ministry of Health (2002) states that the requirements for an industrial building are strong, well-maintained, clean buildings that do not allow health problems and accidents and facilities that are tailored to the needs.

3. Sanitation Facilities

The real situation at Roti Anni related to this aspect is as follows. In general, the existing facilities are available, such as brooms, mops, brushes, detergents and other sanitary tools and materials. Facilities such as toilets are clean because they are always cleaned and there is no odor that interferes with activities. The results of the assessment on this aspect according to employees are 72%; according to owners 81% and researchers 63%. Based on the results, it can be seen that the results of the supervisor's assessment are above the results of the employee's assessment. This is caused by superiors' knowledge of existing facilities that are not in accordance with field applications.

4. Production Tools

Tools and equipment used for production must be made based on plans that meet technical and hygienic requirements. Tools and equipment for production are generally made of materials that are rust-resistant, smooth-surfaced, water-resistant and corrosive-resistant and in accordance with the type of production. The table for processing products is made of stainless steel. The placement of machines/equipment, some of which, such as mixers, dough forming tables and ovens, are in accordance with the process so as to prevent cross-contamination, but the pans are stacked. The results of the assessment on this aspect according to employees are 66%; according to owners 66% and researchers 50%.

5. Raw Materials and Additional Materials
The raw materials used are obtained from regular suppliers who have subscribed and other additional materials are obtained from shops that provide ingredients for making bread. The materials used have obtained permission from the Ministry of Health and BPOM RI because most of the ingredients have trademarks and are commonly used. However, to further ensure the safety of the ingredients and the quality of the ingredients used, UKM Roti Anni has not conducted an independent inspection regarding the organoleptic, physical, chemical, biological or microbiological quality of these ingredients. The results of the assessment on this aspect according to employees are 70%; according to owner 70% and researcher 65%.

6. Processing

BPOM (2012) states that to produce quality and safe products, the production process must be properly controlled. Control of the home industry food production process can be carried out by determining raw material specifications, determining the composition and formulation of materials, determining standard production methods, determining the type, size, and packaging specifications, and determining complete information about the product to be produced including the name of the product, production date, expiration date. The results of the assessment on this aspect according to employees are 77%, according to owners 88% and researchers 66%. Based on results like this, it can be seen that the assessment is almost the same between assessors and categorized as having fulfilled. Process control needs to be carried out continuously to control the quality of raw materials until the product is ready for distribution. Control is not only in procurement but also in storage both raw materials, packaging materials, storage locations, and costs (9).

7. Final Production

Before the product is marketed, UKM Roti Anni has physically checked the product but not chemically and microbiologically checked every product it produces. However, UKM Roti Anni has tried to use SNI products for bread (SNI 01-3840-1995) as a standard reference. The results of the assessment on this aspect according to employees are 75%, according to owners 75% and researchers 75%. Based on results like this, it can be seen that the assessment is almost the same between assessors and categorized as having fulfilled.

8. Laboratory

UKM Roti Anni has not conducted laboratory checks regarding the products produced at all so that they cannot know the food safety quality of bread in the laboratory.

9. Employee

The real situation at Roti Anni related to this aspect is as follows. The clothes used by employees enter the production room with makeshift clothes owned by employees from home. The equipment used is a mask but not applied in its entirety, then gloves for the roasting part. Employees who are sick are given permission for one day, but if the employee is able to work, then he can come to work. Before entering and after finishing production, employees wash their hands in the sink in the kitchen. The activities of employees in the production room apart from carrying out production also sometimes chat with other employees. The results of the assessment on this aspect according to employees are 66%; according to owners 83% and researchers 66%. Employees play an important role in every
production process. It will also support work motivation, employee productivity in working with a comfortable environment and conditions for employees (10).

10. Containers and Packaging

The packaging used to pack the product is Low Density plastic Polyethylene (LDPE) with the aim that bread does not dry quickly and harden. LDPE is low density polyethylene (made under high pressure and temperature). LDPE is a thin plastic with moderate tensile strength and a bright physical appearance, and it is a good water barrier but otherwise against oxygen (11). The advantage of using LDPE is its ability to seal tightly and retain liquids. LDPE is also flexible, resistant to low temperatures, resistant to acids, bases and alcohols, and transparent (12). The results of the assessment on this aspect according to employees are 66%; according to owners 83% and researchers 50%.

11. Label

The real situation at Roti Anni related to this aspect is as follows. The food label printed on the package contains some information for consumers. The information includes the product name, PIRT license number, MUI symbol, production code and expiration date, composition, weight and net content. Food labeling must be clear and informative to make it easier for consumers to choose, store, process and consume food. A food production code is required for product recall, if required (13). Therefore, food labels must include important things that can provide information and give consumers confidence that the product is safe. The results of the assessment on this aspect according to employees, owners (100%) and researchers (70%). Food labels should at least be accompanied by product name, composition, net weight, name and address of the production party, and expiration date. If analyzed more or less the implementation on Roti Anni’s food labels is almost in compliance with existing standards.

12. Storage

Storage of raw materials and final products is carried out separately. Raw material storage rooms are located on every floor in UKM Roti Anni Floors one to three which are entirely used for production sites, there are storage rooms for raw materials and final products respectively. The placement of raw materials in Anni’s bread does not comply with GMP requirements because the raw materials are placed on the floor without mats and the distance from the floor and walls. In accordance with Permenkes Number 1096 of 2011 that raw materials must be placed with the provision that the distance between the material and the floor is at least 15 cm and the distance between the material and the wall is at least 60 cm. For the final product after being cooked, the bread will be cooled first on existing shelves or in the production room without any cover. After it cools down, it is packaged and stored in the storage room until the distribution process is carried out. Storage is carried out using the FIFO system (Frist In Frist Out). The results of the assessment on this aspect according to employees are 77%; according to the owners 88% and 66% researchers, the results of the entire Anni Roti storage area are in accordance with the 2017 CPPOB.

13. Maintenance

Maintenance of production buildings and equipment still requires regular and periodic sanitation measures. There needs to be an SOP regarding building maintenance such as
building repairs if there is damage and room cleaning needs to be done and socialized to workers and their implementation must be monitored by the person in charge of production or quality control. The results of the assessment on this aspect according to employees are 70%; according to the owner 80% and the researcher 63%, from the results of the entire place where Anni’s bread is stored it is in accordance with the 2017 CPPOB.

CONCLUSION

The conclusions obtained in this study are as follows: Out of 13 aspects, 1 aspect is very fulfilling, 9 aspects are categorized as fulfilling, 2 aspects are sufficient and 1 aspect is not fulfilled, namely in laboratory checks according to CPPOB. According to the results of an analysis of the application of GMP to Anni’s Bread, it is better to make changes to aspects that are still lacking to maintain and guarantee product quality.

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