

Analysis of Quality Management in Improving Product Quality: A Case Study of UD Ramayana Agro Mandiri, Batu City

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ABSTRACT

Increasingly tight business competition demands companies to be able to produce quality products to meet customer needs and expectations. Management of Quality is an important strategy in maintaining consistent product quality, increasing customer satisfaction, and strengthening company competitiveness. This study aims to analyze the implementation of Management of Quality in improving product quality and describe the obstacles and solutions implemented at UD. Ramayana Agro Mandiri, Batu City. The study uses a qualitative approach with a case study type. Data were obtained through observation, semi-structured interviews with the owner, admin, production division, packaging division, and documentation as supporting data. Data analysis uses the Miles and Huberman model which includes data collection, data reduction, data presentation, and drawing conclusions. The research findings indicate that the company has implemented seven principles of Management of Quality, namely customer focus, leadership, employee involvement, a process-based approach, continuous improvement, data-based decision making, and relationship management. Obstacles faced include raw material incompatibility, business competition, and the continued discovery of products that do not meet quality standards. The implemented solutions include a raw material return system, quality control, periodic evaluation, and stricter supervision of the production and packaging processes. The conclusion is that the implementation of Quality Management has been running well because it is able to maintain product quality consistency, minimize product non-conformities, increase consumer satisfaction, and support the company's competitiveness.

Keywords: Customer Focus, Management of Quality, Product Quality, Quality Control

1. INTRODUCTION

Changes in society's consumption patterns show an increasingly dynamic shift in line with rapid technological development, rising health awareness, and the push toward a healthier lifestyle. Very fast information flow and global market openness give consumers more product choices and easier access to compare quality. Consumers no longer consider price alone but also pay attention to added value, quality, and the long-term impact of the products they use (Saputro, 2024).

Growing public awareness of the importance of maintaining health has become one of the factors driving increased demand for healthy food products. The rising consumer preference for healthy snacks has driven increased demand for products that are low in calories, sugar-free, and made from natural ingredients, making the Micro, Small, and Medium Enterprises (MSME) segment one of the sectors with consistent growth (Majid et al., 2025). Based on data from the Indonesian Food Industry Association, the healthy snack segment is growing very rapidly; over the past three years the average growth of this segment has reached a fairly high figure of around 18 to 22 percent, with a market value projected to exceed IDR 12 trillion nationally, thereby opening up great opportunities for MSME players. In Batu City itself, MSMEs contribute 47.43 percent, giving a positive impact on local economic development, so that improving product quality is a key factor in strengthening the competitiveness of MSME products in the market (Sindi, 2025).

According to Tanjung (2025), Batu City is known as a center of apple production with various superior varieties such as wangling, anna, rome beauty, and manalagi. According to Noormalasari (2017), the Batu city is known for its apples, which are processed into various products, one of which is apple dodol, produced by small and medium-sized enterprises in the area. However, based on data from the Batu City Central Statistics Agency (BPS), apple production in 2021 was 350,090.88 quintals, and by 2025 apple production had significantly decreased to 106,608.47 quintals. This change has driven the company not to depend solely on apples, but also to make use of various other local raw materials as alternatives. This condition requires the company not only to innovate in the use of apple raw materials but also to continue to ensure that product quality remains consistently maintained. Advances in the fruit processing industry have created an increasingly competitive business environment. Under these conditions, companies are required not only to innovate in the use of raw materials but also to maintain product quality consistently in order to be able to compete in the market.

One of the MSMEs facing these demands is UD. Ramayana Agro Mandiri, Batu City. This MSME produces various types of processed apple products in the form of chips, dodol, and jenang (a thick fruit paste/jam). Processed apple products are widely marketed in souvenir centers throughout Batu City and are an attraction for tourists from various regions. Due to the ease of processing, many MSMEs in Batu City produce processed fruit and vegetable chips using vacuum frying, as explained by Wicaksono (2024) several MSMEs engaged in the fruit chip processing business in Batu City include Panorama, Segar Buah Utama, Permata Agro Mandiri, Brosem, Manasatria Jaya Kusuma, Kendedes, and Bagus Agriseta Mandiri. Companies therefore need to study and understand consumer behavior, as this can serve as a basis for formulating effective business strategies to achieve desired targets. In line with this, Hagiworo (2023) states that understanding consumer behavior also allows companies to identify preferences and satisfaction needs regarding the products offered; by understanding these factors, companies can determine marketing strategies, increase competitiveness, and improve product quality.

Based on the results of an initial interview on 05 January 2026 with Chulatul Lutfiyah, the Admin/Personnel division of UD. Ramayana Agro Mandiri, Batu City, the information obtained shows that the company has carried out various quality management efforts such as sorting raw materials, controlling frying temperature, implementing quality control at every stage of production, and grouping chip products based on quality standards between Grade A and Grade B, which have quality corresponding to company standards before being marketed. However, operationally the company does not always run according to the standards that have been set; there are still product returns from partner stores to the company due to packaging leaks, with an estimated damage rate of around 1 to 2 percent, or about 1 to 2 packs out of every 200 packages produced. In addition, the production process still faces problems such as instability in the oil content of chip products, dodol texture that sometimes hardens, and reject or defective product data that is still recorded only manually.

These constraints indicate that the implementation of Quality Control at UD. Ramayana Agro Mandiri, Batu City has not been carried out optimally and consistently in accordance with operational standards. If this condition is not addressed promptly, it has the potential to increase the number of products that do not meet quality standards, triggering product returns and affecting customer trust and satisfaction with the products produced. Therefore, the company requires a more structured analysis of the implementation of Management of Quality as a continuous improvement effort to reduce the rate of product non-conformity. The implementation of quality management can be one of the supports for efforts to improve product quality so that the company is able to compete and achieve its expected goals (Putra et al., 2024).

With quality management in place, product quality can enhance the company's image, customer satisfaction, and company profits. This has already been widely discussed in previous research on quality management, such as by Sumiarti, Wildah, Astuti, Deni, and Martadia, across various business sectors, both manufacturing and services, as well as in several MSMEs. However, previous research has generally focused on improving product quality and managerial performance partially, and much of it has been conducted in non-agricultural sector companies. Meanwhile, studies on the implementation of quality management in agricultural processing MSMEs, particularly the fruit chip processing industry in Batu City, are still limited. Based on the background above, this study aims to analyze the implementation of Management of Quality in improving product quality and describe the obstacles and solutions implemented at UD. Ramayana Agro Mandiri, Batu City.

2. LITERATURE REVIEW

2.1. Operations Management

According to Lukiaстuti et al. (2024) operations management is a series of activities that utilize various resources as inputs, then process them through certain stages to provide added value, thereby producing outputs that are beneficial to customers. According to Anwar et al. (2024), operational management is explained as the activity of planning, organizing, supervising, and controlling the process of producing goods or providing services. Its purpose is to optimize the use of company resources in order to support the achievement of organizational goals effectively, with a focus on improving efficiency, productivity, and quality at all stages of the operational process.

2.2. Quality

According to Purba et al. (2022), quality is a measure of the conformity between expectations and reality; a condition can be considered of quality if the results achieved exceed the desired expectations. Conversely, if the reality that occurs does not match expectations, then the condition is considered lacking in quality.

2.3. Quality Management

According to Baali et al. (2023), quality management is a structured approach applied to manage, control, and integrate various organizational activities so that the products, services, and processes produced conform to the established quality standards. There are 7 principles of quality management stated by Anugrah et al. (2023) which are customer focus, leadership, employee involvement, process-based approach, continuous improvement, data-based decision making, and relationship management.

2.4. Product Quality

According to Harjadi & Arraniri (2021), product quality describes the level of excellence possessed by a product or service based on its characteristics, features, and ability to meet consumer needs and expectations, whether conveyed directly or as standards set by the company, so that it plays an important role in supporting the success of the company's marketing strategy.

2.5. Conceptual Framework

This study uses a conceptual framework arranged based on theoretical concepts as a foundation for analyzing Management of Quality, which includes operations management, quality management, and product quality, as a basis for analyzing the implementation of quality management at UD. Ramayana Agro Mandiri, Batu City. The research focuses on the seven principles of Management of Quality according to Anugrah et al. (2023), taking into account the problems faced by the company, namely raw material limitations, business competition, and products that do not yet meet quality standards. Through a qualitative approach with a case study method, this research aims to identify the implementation of Management of Quality, describe the obstacles in Management of Quality, and identify the solutions carried out by UD. Ramayana Agro Mandiri, Batu City.

3. RESEARCH METHODS

This study uses a qualitative approach with a case study type. This research was conducted at UD. Ramayana Agro Mandiri, Batu City. Data were obtained through observation, semi-structured interviews with the owner, admin, production division, and packaging division, supported by field documentation. The research instruments used were observation guidelines, interview guidelines, and documentation, used to obtain data regarding the implementation of Management of Quality, a description of the obstacles, and solutions at UD. Ramayana Agro Mandiri. Data analysis uses the Miles and Huberman model, which includes data collection, data reduction, data presentation, and drawing conclusions. Data validation was carried out through source triangulation to compare between interview sources and technique triangulation for the data validation process by comparing information obtained from one source through several data collection techniques.

4. RESULTS AND DISCUSSION

4.1. Management of Quality Implementation

4.1.1. Customer Focus

The research results show that UD. Ramayana Agro Mandiri, Batu City strives to understand customer needs through market surveys, paying attention to consumer purchasing power, providing product packaging variations, and accepting customer input as evaluation material. In addition, the company also strives to maintain customer satisfaction through responsive service, maintaining product availability, and providing quick handling of damaged products.

4.1.2. Leadership

Leadership at UD. Ramayana Agro Mandiri, Batu City can be seen from the owner's role in establishing SOPs, providing direction to employees, providing gradual quality supervision, and motivating employees to maintain product quality. Supervision is carried out starting from the raw material selection stage, the production process, through to product packaging, so that each stage has gradual quality control.

4.1.3. Employee Involvement

Employee involvement in quality management can be seen from their participation in implementing SOPs, maintaining cleanliness during the production process, carrying out product quality checks, and providing training and direction to employees to improve their understanding of the established quality standards.

4.1.4. Process Approach

The implementation of the process approach at UD. Ramayana Agro Mandiri, Batu City is carried out through the implementation of SOPs at every stage of production. The production process starts from the selection of raw materials, uses special dodol-stirring technology to produce the right taste and texture of dodol, controls temperature during production, through to the packaging process where the weight is measured according to the predetermined amount, and distribution of products to the market. Every production stage always involves quality control by employees to ensure the products conform to company standards.

4.1.5. Quality Improvement

Continuous quality improvement is carried out through evaluation of product quality, improving the production process, supervising temperature during production, and developing new product variations according to market needs. These efforts are carried out to maintain product quality while also increasing the business's competitiveness.

4.1.6. Data-based Decision Making

The research shows that decisions taken by the company are based on sales data, market conditions, product stock, and the company's operational experience. This data is used as a basis for determining production capacity, raw material needs, inventory management, and product development strategy.

4.1.7. Relationship Management

Relationship management at UD. Ramayana Agro Mandiri, Batu City is carried out through internal and external relationships. Internally, the company builds a familial relationship between employees and divisions, creating good cooperation in the production process. Externally, the company maintains good relationships with suppliers to ensure the availability and quality of raw materials remains maintained.

4.2. Obstacles and Solutions in the Implementation of Quality Management

These obstacles include limitations in raw materials that meet standards, increasingly tight business competition, and the continued discovery of products that do not meet quality standards, such as burnt chips, uneven product color due to excessive oil absorption, and aluminum packaging that is not airtight, which affects the crispness of the product.

Based on the research results, UD. Ramayana Agro Mandiri, Batu City has implemented several solutions to address the obstacles that arise in the implementation of quality management. These solutions are carried

out through a raw material return system to suppliers, continuous improvement of quality control, and supervision of the production process along with improvement of products that do not yet meet quality standards (Anugrah et al., 2023). The solution to address apple raw material non-conformity is by implementing a return system for raw materials and packaging that do not meet company standards. This step is taken so that only raw materials that meet specifications are used in the production process. The second solution, in facing increasingly competitive business competition, is that the company carries out consistent supervision from the beginning to the final stage of production and conducts periodic evaluations of production results. This activity aims to maintain product quality in order to meet consumer satisfaction and expectations. The third solution is to tighten supervision during the production and packaging process. Supervision is carried out by controlling production temperature, periodically checking product quality, and ensuring that packaging is properly sealed in good condition before the product is distributed.

5. CONCLUSION

Based on the results of the analysis and discussion regarding the implementation of Quality Management in improving product quality at UD. Ramayana Agro Mandiri, Batu City, several conclusions can be drawn. The implementation of Quality Management has been carried out based on the seven principles of quality management to maintain product quality from raw materials through to distribution. However, the company still faces several obstacles, including raw material non-conformity, business competition, and products that do not yet meet quality standards. To address these challenges, the company has implemented a number of solutions, such as returning non-conforming raw materials to suppliers, conducting quality control and periodic evaluation, as well as enforcing stricter supervision of the production and packaging processes to maintain product quality consistency.

Based on the findings obtained during the research process, several suggestions can be put forward. For UD. Ramayana Agro Mandiri, Batu City, the company is advised to optimize the implementation of Quality Management, particularly by strengthening quality control in the production and packaging processes so that product quality remains consistent. For employees, it is hoped that they will improve discipline and thoroughness in carrying out each production stage according to procedure in order to minimize the occurrence of products that do not meet standards. Finally, future researchers are encouraged to develop further studies on Quality Management adjusted to the evolving conditions at UD. Ramayana Agro Mandiri, Batu City.

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