## RAW MATERIAL MANAGEMENT STRATEGY IN THE PRODUCTION PROCESS OF TOS-TOS TORTILLA CHIPS (CASE STUDY AT PT DUA KELINCI)

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#### Abstract

PT Dua Kelinci is a company based in Pati that operates in the food industry. The purpose of this study is to analyze the raw material management strategy in the production process within PT Dua Kelinci's Tostos Tortilla Chips division. The focus of this study is the role of the production supervisor in managing raw materials and ensuring efficient processes. This study employed a qualitative descriptive method, utilizing primary data collected through interviews. The data was then analyzed through data reduction, data presentation, and conclusion drawing. The findings of the study indicate that PT Dua Kelinci implements its raw material management strategy by (1) following a production process in accordance with work guidelines that outline monthly food orders, (2) recording input and output materials for accurate tracking, and (3) sourcing materials based on the quantity and variety of food orders, ensuring timely procurement of required flavors. This approach ensures a smooth production process, helps maintain product quality, and fulfills customer demands. Efficient management of raw materials not only reduces the likelihood of production delays but also ensures operational stability and cost control. The study concludes that strategic raw material management is essential for sustaining production efficiency and product quality at PT Dua Kelinci.

Keywords: Raw Material Inventory, Raw Material Management, Strategy

### Introduction

Manufacturing companies are industrial enterprises that focus on the management of raw materials into semi-finished or finished goods, ready for distribution to vendors or directly to customers. The manufacturing industry will stimulate growth in the agricultural sector, which will provide raw materials for the industry. The service sector will also grow, due to the presence of banking and marketing organizations that can encourage growth in the manufacturing sector. As a result, job prospects will expand, and community income will increase. According to Asmara (2018), a country can stimulate its economic growth by promoting the expansion of the manufacturing sector, which is seen as capable of driving and boosting the economy of the surrounding community. In the manufacturing industry, there are also inventories, such as raw materials. According to Nafarin (2013), raw materials are direct materials (Direct Material), which are materials that form an inseparable part of the finished product. Raw materials are the main or essential materials and are the primary component of a product. The success of a company depends on the procurement of raw materials; it is crucial to search for and select the raw materials that will be used in the production process. Therefore, the quality of raw materials significantly affects the quality of the resulting product. Improving the quality of raw materials and the quality of products is essential to obtaining products that meet the expected quality standards. A well-organized and smooth production process also affects the quality of the products produced.

The production process is the method or technique by which the activities of adding or creating value are carried out. According to Irhami (2014), the production process is what the company produces, whether goods or services, over a period of time, which is then calculated as added value for the company. According to Assauri (2012), the production process refers to methods, techniques, and ways to create or add value to

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goods or services using resources such as labor, machinery, materials, and funds. With high-quality raw materials and a smooth production process, the company is expected to produce products that meet the needs or demands of consumers. According to Satar and Israndi (2019), the quality of raw materials has a significant effect on the quality of products in manufacturing companies. Thus, the quality of raw materials contributes positively to determining the quality of the company, meaning that the better the quality of raw materials, the better the quality of the products.

From the above explanation, the author seeks to understand how raw material management strategies can meet needs effectively while maintaining high quality. The term "process" refers to the methods, techniques, and ways in which labor, machines, materials, and funds are transformed to achieve a result. Meanwhile, "production" refers to activities that create or add value to goods or services. Based on this description, the definition of the production process can be concluded. According to Assoury (2008), production refers to activities that transform inputs into outputs, including the activities of producing goods and services, as well as other activities that support efforts to generate these products. According to Ahyari (2005), the production process is a method, technique, or way in which new benefits are created or added. According to Yamit (2005), the production process is an activity involving human labor, materials, and equipment to produce useful products.

This research aims to explore in-depth the management of raw material inventory in the production process of Tos-tos Tortilla Chips at PT Dua Kelinci. PT Dua Kelinci is located at Jalan Raya Pati-Kudus No. Km 6.3, Lumpur, Bumirejo, Margorejo Subdistrict, Pati Regency. PT Dua Kelinci is a manufacturing company engaged in the food sector. PT Dua Kelinci applies raw material management strategies to ensure the production process runs effectively, just like other companies.

#### **Methods**

The research method used is a qualitative descriptive method aimed at uncovering the current state and presenting what happens according to the facts. This research seeks to analyze how the raw material inventory management strategy is applied in the production process of PT Dua Kelinci in the Tos-tos Tortilla Chips division. This research was conducted at PT Dua Kelinci Pati, and the subject of the research is the production supervisor of PT Dua Kelinci's Tos-tos Tortilla Chips division. The data source used comes from primary data collected through interviews. Data analysis involves data reduction, data presentation, and conclusions.

#### **Results and Discussions**

PT Dua Kelinci Profile

PT Dua Kelinci is a food company located in Pati, Central Java. PT Dua Kelinci was first established in 1972, in Surabaya. Initially, the company was named "Sari Gurih," a name suggested by the two founders, Hok Sie Ak and Lauw Bie Glok. In 1972, they began using the "Sari Gurih" brand for peanut products and started using the Dua Kelinci logo. Sari Gurih developed rapidly, and in 1982, the name Sari Gurih was changed to Dua Kelinci. Then, in 1985, the company was registered under the name PT Dua Kelinci by the founders' sons, Ali Arifin and Hadi Sutiono. Over time, PT Dua Kelinci has grown and innovated significantly. Many new products have been developed, including various flavors of peanuts, coated peanuts, and snacks such as Kuaci Fuzo, Usagi Puff, Deka Crepes, Tos-tos Tortilla Chips, seeds, Tic-tac, macaroni, and beverages like Sirjus. There are many other products that can still be enjoyed today.

#### Vision and Mission of PT Dua Kelinci

The vision of PT Dua Kelinci is to become a trusted food producer in local and global markets, excelling in product quality and services through continuous innovation.

The mission of PT Dua Kelinci is: a. To increase competitiveness and focus on quality, efficiency, and technological advancements, b. To consistently work to improve performance and strengthen the company's brand by leveraging networks and expanding global distribution, c. To compete in quality with efficiency and implement new technologies while remaining responsive to the needs and desires of consumers in Indonesia and internationally.

### Slogan and Commitment of PT Dua Kelinci

To improve performance and increase customer satisfaction, PT Dua Kelinci has the following slogan: "Being the best in the food and beverage industry."

- 1. Maintaining the highest quality, safe, and halal products for customer satisfaction,
- 2. Improving productivity and competitiveness through product and technology development,

- 3. Developing management and resources while anticipating global changes,
- 4. Striving to improve environmental sustainability and harmony.

#### Organizational Structure

PT Dua Kelinci has leaders who are reliable in running the production process effectively and efficiently. The organizational structure of the Production Preparation Division at PT Dua Kelinci consists of: a. Head of Preparation Division, b. Head of Department, c. Head of Preparation Section, d. Subsection Head, e. Team Leader.

The Production Preparation Division for Tos-tos Tortilla Chips has several tasks, such as:

- 1. Carrying out the production process of Tos-tos Tortilla Chips from the arrival of raw materials at the warehouse to the production of finished goods ready for marketing,
- 2. Conducting controlling or supervisory activities during the Tos-tos Tortilla Chips production process.
- 3. Conducting internal audits in the Tos-tos Tortilla Chips production environment.

#### Production Process of PT Dua Kelinci's Tos-tos Tortilla Chips Division

To become ready-to-eat food, the production process of Tos-tos Tortilla Chips is divided into several stages, starting with the purchase of corn, sorting, cooking, soaking, washing, crushing, adding formulated flour, shaping the tortilla chip dough, baking, cooling on the equilibrium conveyor, frying, draining, seasoning, and packaging.

Quality control of the production process is carried out to ensure that the products meet the specifications set by PT Dua Kelinci. Quality control starts from the raw materials, continues through the production process, and applies to the final product, as quality affects customer loyalty. The process that often receives attention from Quality Control is the shaping process, as sometimes the dough does not meet expectations. Similarly, during the frying process, products may puff up, burn, or break easily. The seasoning process is another stage of production that undergoes quality control, as issues with seasoning consistency frequently arise. There are many flavor variants, including roasted corn, Korean BBQ, and nacho cheese. After seasoning, packaging is conducted once the product meets the company's established standards. Packaging activities are machine-driven. After the product is packaged, it is placed in boxes according to flavor and specified weight. Some additional steps are carried out before the product is ready to be shipped, such as sampling (checking for leaks in the packaging), and there are some steps that cannot be explained in detail.

Several machines are used during the production process, especially during packaging. The machines used include the Yamato machine (to divide the product weight before packaging) and the smart machine (for packaging the product). Another important factor is the machine layout. The layout or arrangement of the machines must be suited to the flavor variant being produced or the specific order. Before switching flavors, each machine must be cleaned to prevent contamination between flavors.

In starting the production process, a crucial component is the availability of raw materials. Therefore, the researcher asked several questions regarding the raw materials needed for the production of Tos-tos Tortilla Chips, as follows:

Interviewer: "What raw materials are required in the production process?"

Source: "In making tortilla chips, the main raw material used is corn, which has been selected according to needs."

Interviewer: "What auxiliary materials are used in the production process?"

Source: "Auxiliary materials such as flour and cooking oil must be checked daily in the laboratory to ensure they are fit for use, as well as flavor variants such as roasted corn, Korean BBQ, and nacho cheese." Interviewer: "Where are the raw materials sourced from?"

Source: "All materials are sourced from suppliers, including corn, flour, cooking oil, and packaging (film), both domestically and internationally, according to the flavor variant and packaging boxes."

The source also provided an explanation regarding daily production planning, which varies in terms of quantity and flavor variants. The table below shows the MPP (Master Production Planning) for PT Dua Kelinci's Tos-tos division, for both domestic and international markets, from June 10, 2024, to June 16, 2024:

<b>Table 1.</b> Domestic Master Production Planning	Table	1.	<b>Domestic</b>	N	<b>Master</b>	Pro	duct	ion	Pla	nning
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Item	Unit	Monday 10/6/24	Tuesday 11/6/24	Wednesday 12/6/24	Thursday 13/6/24	Friday 14/6/24	Saturday 15/6/24	Sunday 16/6/24
Tos tos Roasterd corn 20g	dos				3000	3000	3000	3000
Tos tos Roasterd corn 145g Nct	dos	1000	1700		400	400	400	1900
Total Tos tos Roasterd corn	ton	2.9	4.9		4.8	4.8	4.8	9.1
Tos tos Korean BBQ 20g	dos	3000	3000	3000				
Tos tos Korean BBQ 145g Nct	dos	400	400	400		1000	2100	
Total Tos tos Korean BBQ	ton	4.8	4.8	4.8		2.9	6.1	
Tos tos Nacho Cheese 145g Nct	dos			1550	1300			
Total Tos tos	ton			4.5	3.8			

Source: Research resource person

**Table 2.** International Master Production Planning

Item	Unit	Monday 10/6/24	Tuesday 11/6/24	Wednesday 12/6/24	Thursday 13/6/24	Friday 14/6/24	Saturday 15/6/24	Sunday 16/6/24
Tos tos Roasterd corn 22g	dos				95			
Tos tos Korean BBQ 22g	dos		95					
Tos tos Roasterd corn 145g	dos		340					600
Tos tos Nacho Cheese 145g	dos			570	905			
Tos tos Korean BBQ 145g	dos					1220		
Fair Price NC 190g	dos	697						
Fair Price	dos	698						

Source: Research resource person

In the MMP above, the number of domestic orders is higher than the international ones. The production volume varies daily. The roasted corn flavor, 20g variant, produced 12,000 boxes, and the 145g variant produced 5,800 boxes, with a total weight of 31.2 tons. The BBQ flavor, 20g variant, produced 9,000 boxes, and the 145g variant produced 4,300 boxes, with a total weight of 23.3 tons. The Nacho Cheese flavor, 145g variant, produced 2,850 boxes with a total weight of 8.5 tons.

Not all production runs smoothly, and several factors can affect the production volume, such as:

- 1. Whether the daily targets are met,
- 2. Frequent production machine malfunctions,
- 3. Too many orders received, which affects employee overtime hours,
- 4. Frequent flavor changes that require machine cleaning to avoid contamination with other flavors.

## Conclusion

Based on the research results and discussion above, the following conclusions can be drawn:

The production process is closely related to the availability of raw materials. Therefore, raw material management is necessary to maintain the stability of the raw materials used. This allows the company to meet customer demands or orders. Delays in raw materials can hinder the production process, which in turn can slow down the shipping process. Excess raw materials can lead to stockpiling, which can increase operational costs and reduce the quality of the raw materials. In its production process, PT Dua Kelinci applies raw material management to ensure that customer demand is met, and to prevent a decline in product quality by (1) carrying out the production process according to work guidelines that include monthly or weekly food orders, (2) recording input and output materials, and (3) sourcing materials according to the quantity of orders and different flavors.

#### **Suggestions**

Based on the above conclusions, the following suggestions can be provided to PT Dua Kelinci:

- 1. PT Dua Kelinci should maintain and improve the strategies that have already been implemented to ensure that the production process runs even more optimally.
- 2. Improve the quality of raw materials and other materials used in the production process.
- 3. Communicate the strategy to all employees involved in the production process.
- 4. Provide training to employees to enhance their skills.
- 5. Use CCTV in specific areas to monitor all activities carried out by employees.

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