

# CHAPTER I

## INTRODUCTION

This chapter contains the introduction of the report, which includes the background of the research, research objectives, problem formulation, research scope, and outline of the report.

### 1.1 Background

Indonesia has a significant marine and fisheries resources potential geographically. Based on the results of a study by the National Commission on the Study of Fish Resources (Komnas KAJISKAN) conducted in 2016, the estimated potential of fish resource groups in Indonesia is dominated by large pelagic fish species (cob, tuna, skipjack and mackerel) where the catch in the period 2005-2014 ranged from 127,815 – 218,359 tons / year with an average of 182,034 tons / year (Triyono, 2019). The fish processing industry is needed to increase the added value of fish produced in Indonesia. There are many benefits can be obtained through the fish processing industry, which are fish quality can be maintained, various derivative products can be created, and yield losses can be reduced. One of the fish processing industries in Indonesia is run by Small and Medium Enterprises (SMEs) (Triyono, 2019).

Dapur Rendang Yonica is one of the Small and Medium Enterprises that run the fish processing industry. The company produces tuna based products, which are tuna rendang, tuna *lado* hijau, tuna *abon*, tuna skin cracker, and tuna bone cracker. The company address is in Cendana Mata Air Blok D No. 1 Thp IV, Mata Air, Kec. South Padang District, West Sumatera.

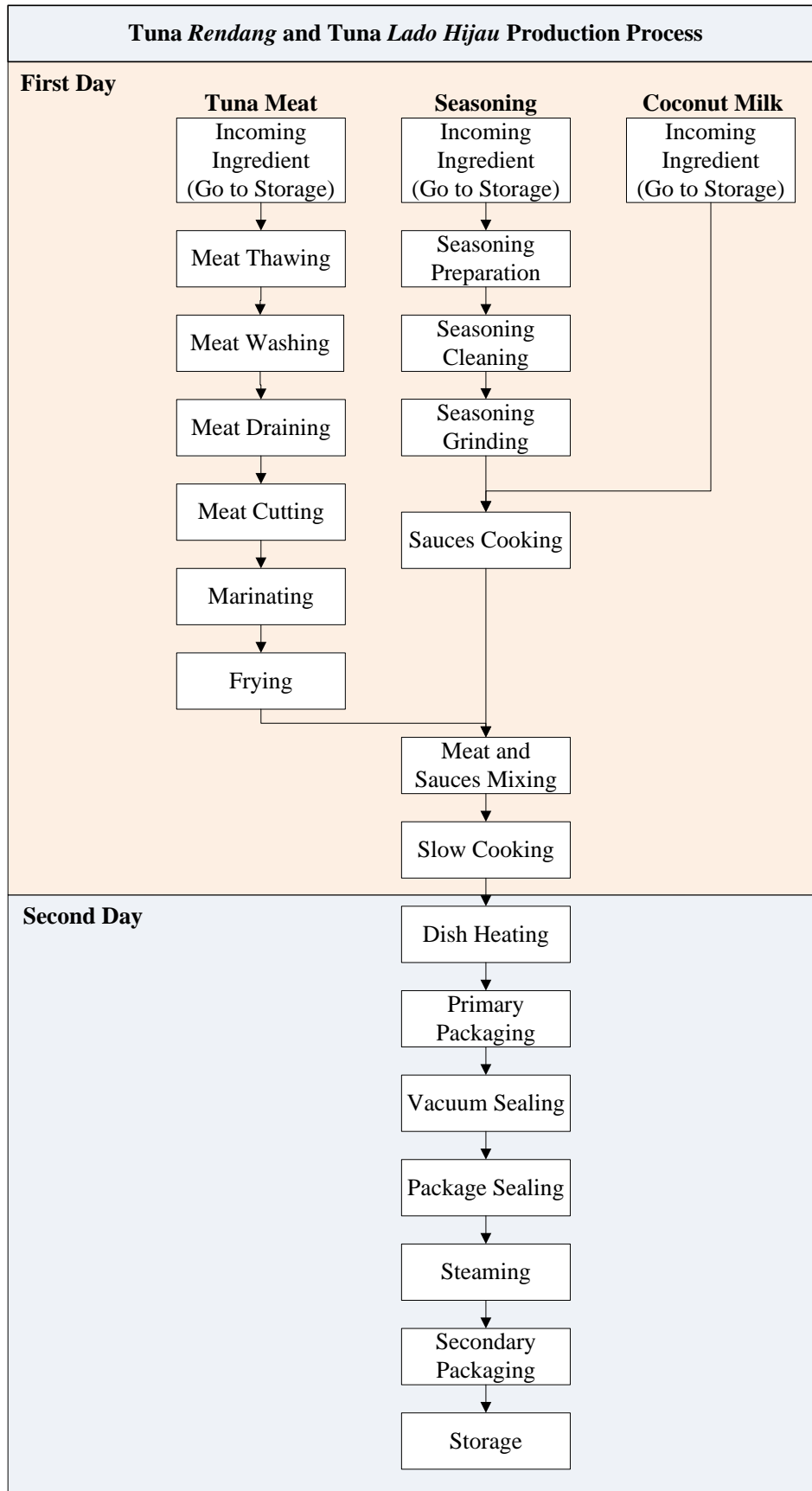
The company has two main workers to run the production process, using two stoves as the main facilities. The current production capacity for each product is shown in **Table 1.1**. The production process of tuna *rendang* and tuna *lado hijau* can be seen in **Figure 1.1**. The production process of tuna *abon*, tuna skin cracker, and tuna bone cracker can be seen in **Appendix A**.

**Table 1.1** Production Capacity per Batch in Dapur Rendang Yonica

<b>Product</b>	<b>Production Capacity Based on Material</b>	<b>Production Time</b>
Tuna Rendang	25 kg	2 days
Tuna Lado Hijau	25 kg	2 days
Tuna Abon	5 kg	1 day
Tuna Bone Cracker	5 kg	3 days
Tuna Skin Cracker	5 kg	3 days

The company products have been certified for SPP-IRT certification in 2018 with the number P-IRT No. 2021371010295-23, which means that the products are feasible and safe to be consumed and marketed. The company also wants to get the SKP (Processing Feasibility of Producing Foods) certification from Ministry of Maritim Affairs and Fisheries, Republic of Indonesia. SKP is a certificate given to fish processing unit which has implemented the Good Manufacturing Practices (GMP) and Standard Sanitation Operating Procedures (SSOP). GMP is a guideline in producing the fish based products to meet the quality standard and safety of food. SSOP is a guideline in applying the good sanitation to meet the quality standard and safety of food (PERMEN-KP, 2019).

The GMP guideline is sourced from the regulation of the Head of Food and Drug Agency of Indonesian Republic No. HK.03.1.23.04.12.2206 year of 2012, and the regulation of the Minister of Maritim Affairs and Fisheries of Republic Indonesian No. 17/PERMEN-KP/2019. The requirements of the GMP include the ingredients selection, location and production environment, building and facility, production equipment, water supply, facility and activity of hygiene and sanitation, health and hygiene of employee, storage, production process controlling, food label, supervision by responsible agency, product withdrawal, recording and documentation, and employee training. The building and facility are the basic aspect to meet the other requirements, which include the facility layout in the production floor and the availability of sanitation facility.

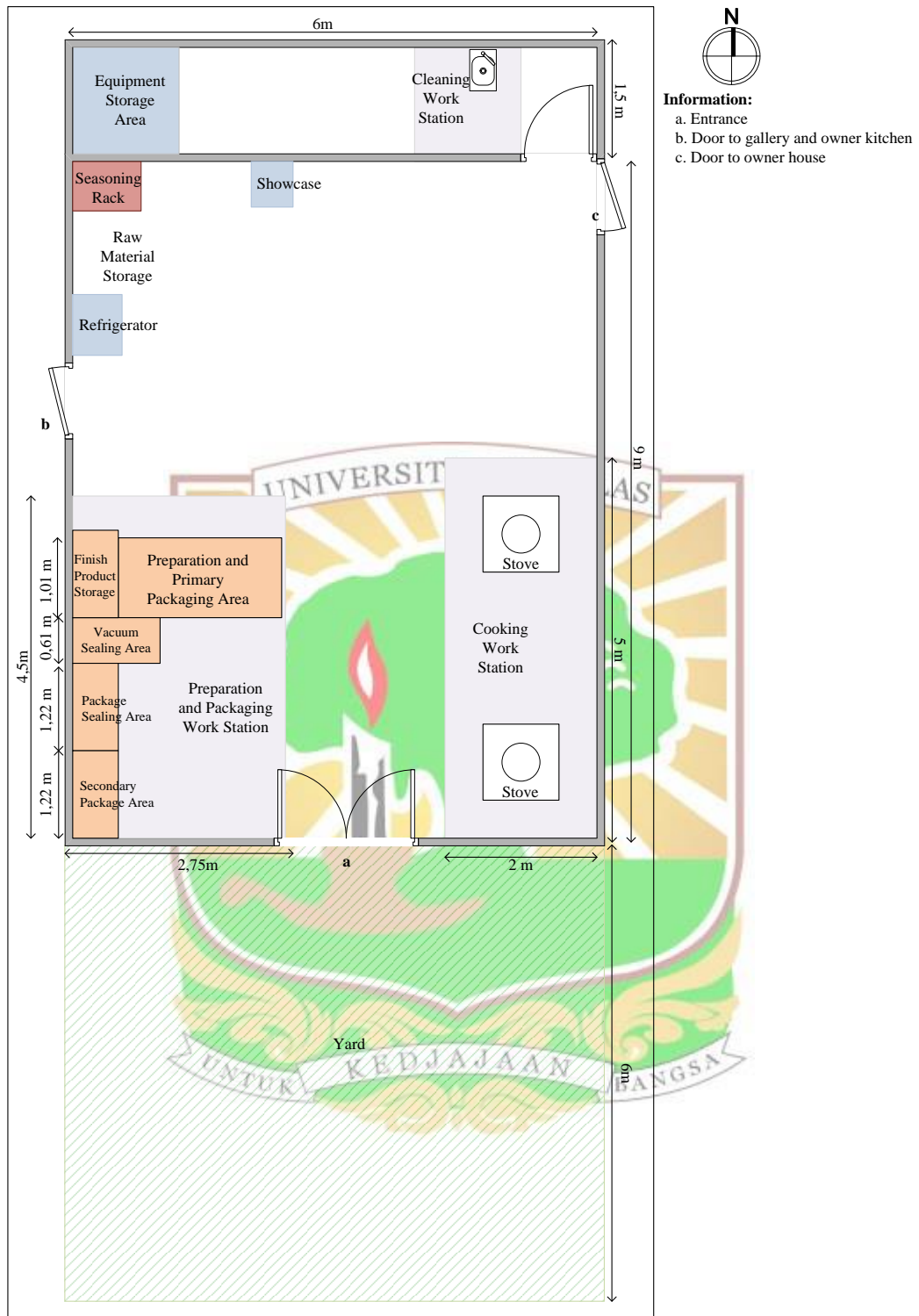


**Figure 1.1** Production Process of Tuna Rendang and Tuna Lado Hijau

All of the products are produced in the same production area. There are three workstations in the company, which are the cleaning workstation, cooking workstation, and preparation-packaging workstation. The cleaning workstation is used for cleaning and cutting the product ingredients. It is also used for cleaning the production equipments. The cooking workstation is used for cooking processes, which are boiling, frying, and steaming. The last workstation is used for preparing and grinding the ingredients, cooling and slicing the cracker batter, draining the *abon* oil, and packing the products.

The current condition of the production floor can cause the occurring of cross-contamination because the raw ingredients and the finish products are processed in the same workstation area. According to the regulation from the Head of Food and Drug Agency of Indonesian Republic No. HK.03.1.23.04.12.2206 (2012), the arrangement of facilities and workstations in the food production floor must able to prevent the cross-contamination during the production process. The current layout of Dapur Rendang Yonica can be seen in **Figure 1.2**.

Besides the condition of the production floor, the company is also lacked of sanitation facility. The available sanitation facility in the company is only the cleaning facility which is used for cleaning the ingredients of the product and the production equipments. Meanwhile, every company engaged in the food sector must have the sanitation facility includes cleaning facility, employee hygiene facility, handwash facility, toilet, and disposal facility (PERKA BPOM RI, 2012). The company also has no standard operating procedures yet. All the activity in the company is carried out by the instruction of the owner. In order to achieve the SKP certification, there must be improvement of facility layout and sanitation in the company. The improvement can be done by designing a new facility layout and Standard Operating Procedures (SOP).



**Figure 1.2** Production Facility Layout of Dapur Rendang Yonica



## 1.2 Problem Formulation

The problem formulation in this study is how to improve the condition of facilities and sanitation in Dapur Rendang Yonica by designing the facilities layout and standard operating procedures.

## 1.3 Objectives

The objective of this study is to design the facility layout and standard operating procedures in Dapur Rendang Yonica to help the SME in achieving the SKP certification.

## 1.4 Research Scope

The scopes of the study are as follows:

1. The conducted study is only since the material arrives in the production area until the product is ready for sale, without discussing the quality of ingredients used at the supply points.
2. The designing of the new layout exclude the design and cost estimation for the building construction.
3. The SOP is only designed for the sanitation and production process.

## 1.5 Outline of Proposal

This report is divided into five chapters, which are:

### CHAPTER I INTRODUCTION

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## CHAPTER II LITERATURE REVIEW

This chapter contains literature and theories relating to the research. The literature sourced from journals, books, scientific research reports, and articles. The literatures related to this research are facility layout, anthropometry, activity relationship chart, blocplan, good manufacturing practices, standard operating procedures, standard sanitation operating procedures, and 5S work principles.

## CHAPTER III RESEARCH METHODOLOGY

This chapter contains the steps in designing facility layout and standard operating procedures in Dapur Rendang Yonica.

## CHAPTER IV DESIGN AND ANALYSIS

This chapter contains the designing process and the analysis of the design.

