

CHAPTER I

INTRODUCTION

1.1 Background of study

Nutmeg is a native Indonesian plant that has high economic value because it is known as a sought-after spice, especially nutmeg seeds and nutmeg mace. Nutmeg is a rare fruit, because nutmeg plants cannot be found throughout Indonesia, only certain areas are known as nutmeg producing areas (Nurdjannah, 2007).

Indonesia's nutmeg production in 2011 reached 15,793 tons, which was produced from a production area of 118,345 hectares and involved 146,331 heads of families (KK) farmers who owned land. West Papua Province contributes 8.6% to national nutmeg production. Indonesian nutmeg is mostly produced by smallholder plantations, which is around 99%, with traditional post-harvest handling methods with makeshift equipment and carried out in a less hygienic way. (Directorate General of Plantations, 2012).

Fak-Fak Regency is one of the largest nutmeg producing areas in West Papua Province besides Kaimana Regency. This district is still mostly nutmeg forest spread across 8 districts, with the largest production volume in Teluk Patipi District. Almost 80 percent of the land in Fak-Fak Regency is overgrown by nutmeg plants. The area of nutmeg plants in Fak-Fak Regency reached 6,071 hectares (58% of the total area of nutmeg plants in West Papua Province) with production reaching 1,884 tons (11% of Indonesia's total nutmeg production), with the number of petani directly involved in nutmeg plant cultivation as many as 2,300 households

Nutmeg seeds and mace are part of the sought-after nutmeg fruit so that nutmeg flesh is often not used and disposed of as waste. If seen, actually nutmeg flesh has the largest presentation in nutmeg but is often discarded and not used. The flesh of nutmeg has a sour, slightly astringent taste and has a distinctive smell of nutmeg. The flesh of nutmeg has a uniqueness in the freshness of taste and aroma of nutmeg so that it can be made into many preparations such as candied nutmeg, nutmeg

syrup, nutmeg dodol and other products. Although there are many processed products from nutmeg flesh, there is still a lot of nutmeg meat that is not used and disposed of as waste. One of the innovations that want to be created to reduce the amount of nutmeg meat waste and increase the economic value of nutmeg meat is to make beer flavor innovations from nutmeg flesh even though what is used is only extract from nutmeg flesh with the manufacture of this product can help utilize nutmeg meat waste.

Beer is the most popular and most consumed alcoholic drink around the world, and it is also one of the oldest. Beer drinking and brewing have been part of human activities since the dawn of civilization. The first beer was basically made from grain, water and spontaneous fermentation due to wild yeast present in the air, just before bread was invented (Campbell, 2017). It has been reported that the Egyptians were the first to document the brewing process around 5000 B.C, it is also believed that the first brewers were part of primitive cultures of Mesopotamia. The birth of modern beer was during the early Middle Ages, when German monks introduced hop as a bittering and flavouring agent. Beer brewing used to be on a domestic scale, but with the arrival of the Industrial revolution, its production moved to mass manufacture, allowing beer to be produced on a much larger scale (Sánchez, 2017).

Brewing of beer has been used in ancient history and has continued to be consumed in the present day with relatively few changes to the basic recipe. Malted barley is the main ingredient, which, when milled and heated in water to extract its nutrients, provides a nourishing sugar and protein-rich solution named wort (pronounced as wert). It is an ideal medium in which yeast may grow and ferment. In recent times hops is added to the boiling wort as it was discovered that hops had anti -bacterial properties which preserved the wort and fermented beer, giving the beer a refreshing bitter taste (Campbell, 2017).

1.2 The Objectives of the Study

The objectives of the study are following below:

1. To reduce the amount of nutmeg meat waste in Indonesia, especially eastern Indonesia as the largest producer of nutmeg.
2. Can be a new product and can be marketed in the international market, nutmeg beer is a new taste innovation of beer.
3. Creating new product innovations, especially in the process of processing nutmeg for the people of eastern Indonesia in order to make good use of nutmeg meat.