

CHAPTER I

INTRODUCTION

1.1 Background of the Study

Fish is a source of unsaturated fatty acids, minerals, protein and vitamins. The chemical composition of each fish will vary, these differences depend on internal and external aspects. Internal aspects include the metabolic rate, reproduction, sex, species and age of the fish. External aspects include aspects of habitat, food availability and water quality (Hafiluddin, 2015). Milkfish is known for its high protein content, according to several studies that have been carried out regarding proximate analysis of milkfish, including that milkfish without chitosan feed treatment contains ash (0.86%), water (79.42%), carbohydrates (3.88 %), fat (0.45%), and protein (15.38%) (Hafiluddin & Haryo, 2011), the nutrients contained in milkfish from Lamongan are ash (1.60%), water (75, 58%), carbohydrates (4.12%), fat (1.27%) and protein (17.41%), while the nutrients contained in milkfish from Pamekasan are ash (2.80%), water (70.78%), carbohydrates (2.63%), fat (1.41%) and protein (22.31%) (Hafiluddin et al., 2014). The proximate composition of milkfish from brackish water habitats is ash (1.41%), water (70.79%), carbohydrates (2.78%), fat (0.85%) and protein (24.18%) (Hafiluddin , 2015). Indonesia has the potential for waters that are rich in biodiversity, one of which is the abundance of *Chanos chanos* (milkfish) (Huniyah et al., 2015).

Indonesia has the prospect of fish cultivation good milkfish, 2008 production results there are 422,086 milkfish cultivators tonnes, higher than Philippine production. This type of fish only reached 349,432 tons. In Indonesia in 2012 experienced increased production reached 482,930 tons (Yusuf et al., 2014). There has been an increase significant impact on milkfish production, namely in 2010 production reached 421,757 tons and in 2014

production increased to 621,393 tons, so there was an increase production reaches 10.4% every year (Alyani et al., 2016).

The specific reason for choosing milkfish as the main ingredient is because this fish does have a distinctive smell but is still acceptable to the average Indonesian tongue compared to other fish such as gourami, catfish which have a more disturbing distinctive smell like the taste of sand. And also, this fish has a high fat content so that when cured it will produce a good texture.

The use of milkfish can also encourage Indonesia's food security. Currently, the majority of milkfish commodity sales are absorbed by the local market. During 2022, the Ministry of Maritime Affairs and Fisheries (KKP) recorded Indonesian milkfish production reaching 779 thousand tons. This achievement is quite large considering that the gains were obtained from traditional cultivators who used traditional technology. However, in terms of exports, milkfish cultivation has not been able to become a major source of foreign exchange, such as tilapia and shrimp. Milkfish for the export market can be categorized into two, namely milkfish bait and milkfish for consumption, where the size of the harvest is the difference between the two types. Indonesian milkfish commodities are in demand by several Middle Eastern and other Asian countries. So to maintain the freshness and durability of fish, the freezing method is usually used, with this a new method has emerged to maintain this durability by the curing method.

Curing is a processing method and pickling to attract water or reducing the water content of fish by means salting (salting), drying, smoking, boiling (boiling in salt), and acidification. Based on the research results of Abdul et al (2016: 1) drying is a method very easy and ordinary traditional done. Drying is better and faster if the fish has previously been processed salting to stop activities putrefactive bacteria. Curing is a processing method and pickling to attract water or reducing the water content of fish by meanssalting (salting), drying, smoking, boiling (boiling in salt), acidification and fermentation (Ilyas in Nathania et al, 2017) Smoking is a dehydration (drying) technique used to

maintain the shelf life of fish by using wood fuel as a smoke producer. With smoking, heat will be produced which will reduce the water content of the fish and inhibit the activity of microorganisms (Winarno, et al., 1980). According to Moeljanto (1967), cold smoking has a temperature of 30 - 40 °C with a smoking time of up to two weeks. Thus, besides the fish absorbing a lot of smoke, the fish is also drier by evaporation. To get the desired smoked fish results, there are four things that need to be regulated: (1) freshness of the fish, (2) volume and quality of smoke, (3) temperature and humidity of the air in the smoking room, and (4) speed of air/smoke flow. Buckle, et al. (1987) said that the processing of smoked fish is a series of processes starting from salting or adding other spices, drying, heating and smoking. Furthermore, Moeljanto (1992) added that the thickness of smoke or the amount of smoke absorbed by the fish will determine the aroma and taste of smoked fish and needs to be adjusted to consumer tastes. Thus, there is a balance between the level of consumer acceptance and the shelf-life of the smoked fish.

1.2 The Object of the Study

The objectives of this study are following below

1. In order to market milkfish (*chanos chanos*) more widely at home and abroad as a fish that is rich in good nutrients that are useful for the human body.
2. To find out whether this typical Indonesian fish can be salted using the curing method
3. To increase its economic value which is higher than fresh fish, because it can be stored longer and has better durability, thereby increasing its selling value on the market.
4. To make the latest innovations in milkfish processing, especially in Indonesia.