

CHAPTER I

INTRODUCTION

1.1 Background of Study

Nowadays, ready-to-eat food is becoming a food trend that is increasingly in demand especially for people who have high mobility because the serving process is fast, practical and can be consumed directly so it helps save time and effort. Ready-to-eat foods need to pay attention to the importance of quality food that is not only tasty, but also has useful content. One of the food product that has nutritional and practical content is cereal that has carbohydrate value and it also enriched with other nutrients such as iron, thiamin, riboflavin, and vitamin E (SDE, 2017). A study explains that the selection of products by consumers to be used as breakfast is focused on products such as beverages, extruded product and cereals (Situmorang et al, 2017).

Flakes that are included in cereal food are one of the instant food that are generally consumed as breakfast which is important in meeting one's energy needs to increase concentration and nourish the body. However, the composition of the cereal out there usually consists of several ingredients, one of which is sugar. Sugar can also provide energy to consumers but excessive consumption of sugar often causes various health problems. Refined sugar is often found in food or beverage product packaging. Refined sugar is sugar that comes from sugarcane juice. In the manufacturing process, sugarcane juice will go through a long purification and processing process to produce pure sugar. Refined sugar is low in nutrients because it only contains pure sugar and has no fiber, vitamins, minerals or protein. Meanwhile, natural sugar is a sweetener that is already present in minimally processed foods. Cereal products generally list sugar on the nutrition panel at second or third, which is a bad sign. Cereals, which are generally consumed as breakfast, when they have a high sugar content, will cause blood sugar levels to spike and then fall rapidly and

consuming too much sugar can cause sugar addiction. On the one hand there are also cereal products that do not have added sugar but are not enjoyable to enjoy because according to the 2018 Riskesdas data, as many as 61.3% of respondents consume sweet foods per day, which means that sweet foods are more in demand.

Basically the most commonly used grain for cereal are rice, wheat, corn, and ect (Melly Amanda, 2020), which is cereals are a source of carbohydrates, an average of 79.60g /100 g (USDA, 2016). However, when the material above has a weakness, namely wheat is a plant that is difficult to grow in Indonesia, so it needs to be imported to meet needs. Rice has a glycemic index content of around 54-121% depending on the variety, but high glycemic index can cause a high increase in glucose levels and according to the 2017 BPS records, rice is an imported commodity reaching 2.2 million tonnes. Likewise with corn which has been widely used in food manufacture, one of which is corn flakes and corn production in Indonesia is also still low, so imports of materials are needed to meet demand. Seeing this, other raw materials are needed that can overcome the deficiencies of these material.

One of the local food ingredients that grows abundantly in Indonesia is sweet potato that is widely consumed and used by Indonesian people due to its relatively cheap price, high nutritional content and abundant availability (Ratna et al.2022). Cilembu sweet potato is a group of sweet potatoes potential as food and industrial raw materials. The specialty of this sweet potato is have a sweet taste beyond other sweet potatoes so that is can reduce the use of sugar in the processing process and and can be an alternative sweetener to replace added sugar. Processed products from Cilembu Sweet Potato are currently still limited, so the advantages they have are not utilized properly, therefore it is necessary to diversify this sweet potato based products. The shelf life of product that are generally processed such as roasted sweet potatoes, does not have a long shelf life because it needs further processing to extend its shelf life (Rosy Hutami, 2019). One effort that can be done is process cilembu sweet

potato into a semi-finished product, namely cilembu sweet potato flour so that it can become a better value commodity (Melly Amanda, 2020). Cilembu sweet potato processing into flour will improve its function and facilitate its use as a raw material. This is also one of the developments of food product that have high shelf life and save storage space. This cilembu sweet potato flour can also be used as a substitute for wheat flour. After it has become Cilembu sweet potato flour, it needs to be processed in such a way as to increase the selling value of Cilembu sweet potato flour. Cilembu sweet potato flour can be used as a basic ingredient for making cereal

Apart of cereals, sweet potatoes also have a high carbohydrate content as a source of energy for the body so that it is possible to be used as raw material for making flakes (Hapsari et al, 2019). The problem of added sugar in cereals out there can also be solved by using Cilembu sweet potato as the main ingredient for making flakes because according to Lily Arsanti who is a Health Nutrition lecturer, even though it has a sweet taste and contains Cilembu sweet potato sugar it is safe for consumption by people with diabetes because it contains fiber in Cilembu sweet potato which can inhibit the absorption of blood sugar.

One effort to improve the quality of flakes is by adding peanuts to increase the protein content (Ratna et al. 2022). Peanut (*Arachis hypogaea* L) is a type of legume from the leguminose family. It is popular in Indonesia and has potential food crop commodities to be developed. There are not many have processed peanuts into various product with higher economic value when compared to selling them in commodity form (Lilis Suaibah, et al, 2019). The characteristics of these peanuts are seasonal, take up space, and are easily damaged (Suaibah, et al, 2019), so proper processing technology is needed to extend their storage time and one way is process them into flakes. The protein content is a necessary nutrient in the manufacture of flakes because generally cereal are consumed in the morning which requires protein to provide energy and satiate.

1.2 The Objectives of the Study

The objectives of this study are following below :

1. To increase the use of nutritious local food product and diversify food product that can support food security.
- 2.To create cereals without added sugar that are not only delicious but also healthy to consume.