

# CHAPTER I

## INTRODUCTION

### 1.1 Background

Food processing technology is a way to improve the quality of a food by way of diversification of food products. The diversity of food products can increase the added value of the products in order to meet the nutritional value of the food needed by the community. Roots of cogon grass is one of the herbs that are very popular for people to eat and have a fairly complete nutritional value. The roots of cogon grass have good benefits for the health of the body because they contain glucose, mannitol, citric acid, malic acid, arundoin, coixol, fernerol, cylindrin, anemonin, simiarenol, esin, saponin, alkali, polifenol and tanninine. The content of nutrients from the roots of the cogon grass is often used as a traditional medicine for whooping cough, treat inflammation of the liver, asthma, hepatitis, fever, high blood pressure, treat of Pneumococcal disease, indigestion, diarrhea, cough bleeding illness, kidney infection, bloody urine, nosebleeding, gallstone disease, etc (Anonymous,2016).

One example of processed products from the roots of cogon grass is nata. Nata is one of food product that contains fiber, is fermented by *Acetobacter xylinum* bacteria. Nata is a food product that is light, attractive and has a delicious taste so easy to consume and be liked by the community. In general, nata is used as a refreshing or dessert food or used as canned food mixed with other fresh fruits. Giving a name to nata depends on the type of growth substrate *Acetobacter xylinum*, so the name of the nata that is made from raw cogon grass is Nata de Cogon Grass. Nata is a gel-like material (gelatin) that floats on a medium containing sugars and acids produced by *Acetobacter xylinum* microorganisms. The presence of CO<sub>2</sub> gas released by the bacterium *Acetobacter xylinum* when metabolism attached to the extracellular polysaccharide fibrils that cause floating. Nata will appear as an irregular fibril mass resembling a thread or cotton when viewed under a microscope (Pambayun,2002).

Nata is produced from the fermentation process on the substrate containing sugar and nitrogen at pH which corresponds to the development of *Acetobacter*

*xylinum* which is around 4-4,5. Technically, nata can be made from a mixture of various media, due to the growth of the *Acetobacter xylinum* bacteria in the mass production of nata required sugar, organic acids and minerals. These minerals and organic acids are needed as a metabolic component in the formation of extracellular enzyme cofactors produced by *Acetobacter xylinum* bacteria. So, because nata de coco is usually made from fermented coconut water, the writer wants to make another variants of nata de coco, which is from fermented cogon grass water, which has benefit for the liver, asthma, hepatitis, fever, high blood pressure, treat of Pneumococcal disease, indigestion, diarrhea, cough bleeding illness, kidney infection, bloody urine, nosebleeding, gallstone disease, etc.

## **1.2 Objective**

1. Presenting a high quality nata from Cogon grass with no artificial preservatives, and hygienically packed so that it can compete in the world of food industry in Indonesia.
2. Creating a unique product that made of Cogon Grass as the another variant of common nata de coco.
3. Explaining what benefit from Nata de Cogon grass to people who have diseases.