

CHAPTER I

INTRODUCTION

1.1 Background Study

Jackfruit seeds are a variant of jackfruit waste that are oval in size with a length of about 3.5 cm to 4.5 cm, with an area ranging from 3 to 9 grams. The surface of the skin of the fruit is rough and prickly. Each jackfruit can produce 100 to 300 seeds, then the jackfruit seeds are divided into two parts, the average number of seeds per jackfruit is 30 to 50 seeds, and the ratio of seed weight to fruit is about a third the remaining is the skin and flesh of the fruit or about 10% to 15% of the fruit mass. Jackfruit seeds consist of three layers of skin, namely slightly soft yellow skin, white clay skin and brown skin that wraps around the fruit flesh. , and also consists of an outer and an inner layer. In addition, these seeds are covered in colored flesh to dark yellow. These seeds have a thin outer layer, and a thick white inner layer depending on the type of jackfruit, and these seeds are usually used as dry processed ingredients such as crackers, noodles, to milk because the processing is not as difficult as other fruits (Liananda Citra, 2019).

Jackfruit seeds are materials that are prone to wasted, like the skin and seeds of other fruit, for several reasons, the first is due to lack of processing and taste, then most people only develop based on data about jackfruit flesh. But it's just that many people do not understand how to execute this material properly so that it is often used as waste or wasted material. It's just that many people don't know the benefits of this fruit seed, namely, it contains anti-microbial which means it can be useful that prevents e-coli substances that cause digestive problems. Then it lowers bad cholesterol levels or can be referred to as LDL (low-density lipoprotein), and increases good cholesterol or known as (high-density lipoprotein). Then the next flavonoid is part of the antioxidants found in food. If allowed to accumulate, free radicals can cause damage to DNA and healthy cells, causing balance disorders in the body. This damage can then trigger various diseases. Starting from arthritis, heart

disease, atherosclerosis, stroke, hypertension, stomach ulcers, Alzheimer's disease, Parkinson's disease, cancer, to cause premature aging. Antioxidants work to neutralize the destructive nature of free radicals so that they can prevent these diseases. It also contains Vitamin A which can be used as a natural remedy to prevent hair loss. Jackfruit seeds are rich in nutrients, especially carbohydrates, potassium/potassium, phosphorus, and fat. The energy content (165 kcal) and carbohydrates (36.7 kcal) of jackfruit seeds are quite high compared to the same content of young jackfruit and ripe jackfruit makes jackfruit seeds become an option for people in South Asia to make jackfruit seeds as a snack to ward off hunger. Jackfruit seed oil content reaches 11.39%. (Sindumarta, 2012).

Jackfruit seeds or commonly called pongge concrete are mostly discarded and only a few people use them by boiling. Judging from the chemical composition, jackfruit seeds contain quite high starch, which is around 40-50%, so that it is very potential as a source of starch. The content contained in jackfruit seeds are energy (165 kcal), protein (4.2 g), fat (0.1 g), carbohydrates (36.7 g), calcium (33 mg), phosphorus (200 mg), iron (1 mg), vitamin B1 (0.2 mg), vitamin C (10 mg), and water (57.7 g). Jackfruit seed is a source of carbohydrates (36 g/100 g), protein (4.2 d/100 g), and energy (165 kcal/100 g), so that it can be used as a potential food ingredient. Jackfruit seeds. It is also a good source of minerals. In 100 grams of jackfruit seeds contained phosphorus (200 mg), calcium (33 mg), and iron (1.0 mg) (Nuraini, 2011). And contains crude fiber (12,4 g) for dietary purposes or weight loss programs (Purbasari, 2014).

The reason for taking and researching the jackfruit fruit is to use jackfruit waste so as not to pollute the environment, and to change people's mindsets that jackfruit seed waste is not useful in making products that can be reused.

1.2 Objectives of The Study

1. Requirements to continue the intership program
2. Development and making waste fruit part to salable item
3. Know the nutrients contained in jackfruit seed

1.3 Benefits of The Study

1. Benefits for Students
Became one of the creative business idea in the future. Development for new product in market.
2. Benefits for OTTIMMO
Enrich database of edible snack through Reseach & Development program.
3. Benefits for readers
As an idea to create mindset about any fruit waste can be use for product ingredients.