

# CHAPTER 1

## INTRODUCTION

### 1.1 Background of The Study

The jackfruit (*Artocarpusheterophyllus*), also known as jack tree is a species of tree in the fig, mulberry, and breadfruit family (*Moraceae*). Jackfruit is also an ingredient that is familiar to all people. In Indonesia, jackfruit is called “Nangka” while young jackfruit also known as Green Jackfruit is called “Tewel”. Young jackfruit price is cheap and it is often used for making traditional food or soup. In Indonesia young jackfruit also often used in many dishes such as Gudeg, Gulai Nangka, Megono, Abon Nangka and many more. The best part about jackfruit is that all part of it is edible. Not just the fruit inside, but the seeds as well. Ripe jackfruit can be eaten fresh or added to desserts. When it’s ripe the inside of a jackfruit is bright yellow and the majority of the fruit is comprised of large pods. Once the pods are separated from the jackfruit’s rind and core, the seeds can be removed from these pods so it’s left with is the sweet, yellow flesh to eat. Ripe jackfruit has a very chewy, stringy texture and unique, tropical flavor—almost a hybrid of pineapple, banana, and mango. If it’s the unripe/green jackfruit is the most interesting and useful. The flesh of unripe or young green jackfruit is off-white in color and almost neutral in flavor. These attributes in addition to its signature texture make it ideal for cooking applications in meat alternative or plant-based recipes. Because the fruit is not fully developed, the pods and seeds are also smaller. It has a fibrous texture that very similar to chicken or pulled pork, which makes it an excellent "vegetarian meat" for curries, salads, and noodles

A study at Sydney University Glycemic Index Research Service has confirmed that consumption of unripe jackfruit can help fight high blood sugar level. The study was undertaken on the basis of report of the reports on the positive effect of unripe jackfruit for diabetes and it was carried out under an initiative funded by the Kerala State Industrial Development Corporation to commercially exploit freeze-dried

unripe jackfruit. According to the study, 30grams of dehydrated unripe jackfruit replaced a cup of cooked rice or two wheat chapatis and also offered much higher level of being satiated or the feeling of being full, eliminating the need for snacks. The study showed that glycemic load (glucose level) in unripe jackfruit is almost half that of the rice or wheat. This is the reason why unripe jackfruit helps reverse the diabetic condition (Martin, 2016)

Young jackfruit has a lot nutritional value and healthy benefits. It is a good source of potassium. According to the American Heart Association (AHA), foods rich in potassium can help reduce blood pressure. Potassium lowers blood pressure by counteracting the effects of sodium and reducing tension in the walls of blood vessels (Lillis,2019).

Young jackfruit is a healthful source of vitamin C, potassium, dietary fiber, and some other essential vitamins and minerals. According to the United States Department of Agriculture, a cup of raw, sliced young jackfruit contains 157 calories,2.84 g of protein,1.06 g of fat, 38.36 g of carbohydrates, 2.5 g of dietary fiber 31.48 g of sugars,48 mg of magnesium, 739 mg of potassium, 22.6 mg of vitamin C. (Lillis,2019)

As the year pass, many people have a new resolutions such as losing weight, eating better, getting healthier, and doing more to make the world a kinder place. And many people accomplish all these goals by going vegetarians and vegan. For people who don't follow a vegetarian or vegan diet, the difference between them can seem unclear. Vegans eat no animal products, while vegetarians don't eat animals, but may eat products that come from them (such as dairy and eggs). Veganism is defined as a way of living that attempts to exclude all forms of animal exploitation and cruelty, whether for food, clothing or any other purpose. For these reasons, the vegan diet is devoid of all animal products, including meat, eggs and dairy. People choose to follow a vegan diet for various reasons. These usually range from ethics to environmental concerns, but they can also have a desire to improve their health(Petre,2016). Studies show that vegans have better heart health and lower odds

of having certain diseases. Those who skip meat have less of a chance of becoming obese or getting heart disease, high cholesterol, and high blood pressure. Vegans are also less likely to get diabetes and some kinds of cancer, especially cancers of the GI tract and the breast, ovaries, and uterus in women. Going vegan might even help the reader live longer, especially if the reader also cut down on the reader's daily calories. Better weight control may be one reason for all of these health benefits. Vegans have a lower body mass index (BMI) than people who eat animal-based products(Zelman, 2019). And these days the demand for vegan food is increase rapidly, and companies are coming out with many delicious meat- and dairy-free options. But these products are not available in Indonesia. So I decided to start a business that sells vegan products called “(V)Choice”, V is for vegan which mean Vegan Choice.

The author first product is a vegan nugget that made from young jackfruit. The author choose to use young jackfruit because it has fibrous texture that very similar to chicken and neutral flavor which works with all kind of seasonings. This is a good product for vegans and vegetarians because they can't eat the regular chicken nuggets because it's contain animal product. The author product is free from all kind of animal product such as meat, milk, and eggs. This product is made by simmering the jackfruit in a vegetable stock and vegan poultry seasonings until the flavor absorbs to the jackfruit. Then silken tofu and tapioca starch will be added for giving a chewy texture and as binding agents. And I will use egg white replacer and vegan breadcrumbs for the crispy skin. This product will suitable for those who are vegan and not vegan because besides it is taste like other nugget it is also a better and healthier choice for those who want to buy frozen nuggets.

## **1.2 The Objective of The Study**

Research and development is a process or steps to develop a new product or improve an existing product. This research is done to find out the best vegan

substitutes for chicken meat and turn those ingredients into frozen food products. This research also has a purpose to give new innovation in food industry especially in frozen food and to describe the process of processing young jackfruit into nuggets. Through this research the author can find out the product that is needed by people or to find out people perceptions about the author product.

The results of this research are used to make a new system that is better for the company. By research and development, the author would able to produce a product that has a high validation value because the product is produced through a series of trials and revision.

### **1.3 The Benefit of Study**

1. Improve the quality of frozen food that is unique and interestingly packed
2. Improve the reader's knowledge about the nutrients of Jackfruit
3. Improve the reader's knowledge about vegan and vegetarian
4. Improve the reader's creativity in processing Jackfruit into nuggets
5. reating a career opportunity and reduce unemployment
6. Give variation in business competition