

CHAPTER II

LITERATURE REVIEW

2.1 Jackfruit

Artocarpus heterophyllus Lam., which is commonly known as jackfruit is a tropical climacteric fruit, belonging to Moraceae family, is native to Western Ghats of India and common in Asia, Africa, and some regions in South America. It is known to be the largest edible fruit in the world. Jackfruit is rich in nutrients including carbohydrates, proteins, vitamins, minerals, and phytochemicals (Int J Food Sci., 2019). There are a lot of varieties of jackfruit, however there are two main varieties which is firm, and soft. The soft variety has fruity and sweet taste, small, fibrous, soft, and spongy texture, while the firm variety is crunchy, not sweet, and has a meat-like taste. Jacktree is a medium-sized evergreen tree, and typically reaches 30 – 70 ft. tall and 20 – 50 ft. wide. The tree grows rapidly in early years, up to 1.5 m/year (5 ft/year) in height, slowing to about 0.5 m/year (20 in/year) as the tree reaches maturity. They average between 10 and 40 pounds, though some fruits have been known to weigh 80 pounds or more (Jon Vanzile, 2021). Jackfruit that is used in this study is shown in figure 2.1



Figure 2. 1 Young Jackfruit

2.2 Sushi

Sushi is the most common food in Japanese cuisine and is very popular worldwide. Sushi consists of two parts, the Shari and the Neta. *Shari* is the rice part, and *Neta* is the topping. The rice for Shari is usually made of a mixture of Japanese rice with vinegar, salt, and sugar. This mixture is invented to prevent the raw materials like fish from going bad (Hiro K., 2022)

Sushi's origin comes from Southeast Asia and has a history of over 1200 years. In the Nara period (8th century), people preserve fish by putting them inside a mixture of rice and salt to ferment. At first people would only eat the fish without rice and was considered dish for the upper-class people. Then, during the Muromachi period (14th to 16th century) is when people began to eat both fish with rice together. After that, during the Edo period (17th to 19th century) is when sushi started to become popular amongst the general population. Here is when people started to use vinegar in the rice instead of letting it ferment. At the beginning of the Meiji period (late 19th century), Ice making machines started to become a thing. With that, preservation of fish became much easier, making it possible to use raw fish (sashimi) as a topping. This is when the sushi that the world know now became a reality (Hiro K., 2022).



Figure 2. 2 Different varieties of sushi

The most common known sushi worldwide is a fish on top of a rice ball, or rice wrapped around a seaweed, however there are a lot of different types of sushi which are, nigiri sushi, maki sushi, oshi sushi, chirashi sushi, inari sushi, temaki sushi, and gunkan sushi. Different varieties of sushi that are mentioned is shown in figure 2.2

2.3 Fukumi Rice

Fukumi rice is a rice that is made from porang (*Amorphophallus muelleri*). Porang is a tuber from Indonesia which belongs to the Araceae family. As a plant that produces carbohydrates, fats, proteins, minerals, vitamins and dietary fiber, porang plants have long been used as food and exported as industrial raw materials (Nasir Saleh, 2015). Porang rice is one of the processed forms of porang which is included in the type of analog rice. Analog rice is rice of choice or an alternative to rice which is usually consumed daily as rice which is the staple food. During the Japanese colonial era, people were forced to collect tubers for their food and industrial needs. Since World War II, porang has been exported to Japan, Taiwan, Singapore and South Korea. In 1975, the farming of porang plants was revived by the fact that this plant has high economic value and is very profitable because its glucomannan can be used as a functional food which has health benefits. The nature of the porang plant which is shade tolerant, allows this plant to be cultivated in any land (Nasir Saleh, 2015).



Figure 2. 3 Fukumi rice package

Nowadays, people eat porang rice because porang rice has many benefits such as helping the absorption of calcium, helping to lose weight, and lowering cholesterol levels in the blood (Jemima K. R., 2022). Not just because of its benefits, fukumi rice is very popular in Indonesia. Because of its low calories, a lot of people like to eat this rice for diet purposes. Fukumi rice is also very practical compared to other rice, the reason is because fukumi rice does not need washing like the usual rice and just need to be poured to a boiling water, seal the container, wait for a few minutes and it is ready to eat. Because of its practicality fukumi rice is liked by a lot of people and can be cooked anywhere and anytime (Reni Soengkunie, 2022). A picture of fukumi rice is shown in figure 2.3