

CHAPTER II

LITERATURE REVIEW

2.1. Ingredient Review

2.1.1 Mung Beans

Pulses (legumes) are plant-based proteins that are cheaper and more affordable than animal protein sources such as meat, poultry, eggs or milk. Among these legumes, mung beans are one of the most important legumes because mung beans are a favorite legume and are often consumed by the community. Mung beans are one type of food crop that has an important role as a source of nutrition, namely as a source of carbohydrates, protein and minerals, and has better marketing prospects so as to increase farmers' income. This plant is multipurpose. The carbohydrate content in 100 g of mung beans amounts to 62.9 g, which is higher than the carbohydrate content in soybeans and peanuts. Hussain's research results explain that mung beans have a high nutritional value whose seeds contain 24.2% protein, 1.3% fat and 60.4% carbohydrates.



Figure 2.1 Mung Beans

Mung beans are also one of the legumes that are rich in isoflavone protein content. Isoflavones belong to the flavonoid group (1,2-diarylpropanes) and are the largest part of the group. Isoflavones are a type of estrogen compound that has high antioxidant activity.

2.1.2 String Beans

String Beans is one type of Indonesian tropical vegetable that is grouped into nonclimacteric vegetables and is very popular, in its consumption string beans are generally processed into various types of vegetables including vegetable soup. In Indonesia, string beans are one of the largest producers of horticultural products besides carrots, onions, long beans and cabbage. String Beans are not seasonal so they are available at any time, but during storage they are easily damaged both at room temperature and cold temperatures, so it is necessary to do a good packaging and storage effort. Therefore, consumers will feel facilitated if string beans can be traded in the form of fresh packs.



Figure 2.2 String Beans

String beans are an important source of protein, vitamins and minerals and contain other substances with medicinal properties in various diseases. Gum and pectin can lower blood sugar levels, while lignin is effective in preventing colon cancer and breast cancer. Lignin is effective in preventing colon cancer and breast cancer. Crude fiber in string beans pods is very useful for digestion so that it can remove toxins from the body. remove toxic substances from the body

2.2 Product Review

Patty, which comes from animal ingredients in the form of ground meat solids, is one part of fast food (Fadly & Purwayantie, 2019). One of the characteristics of fast food is that the number of calories is quite high, so many people are very careful in choosing patties as food. The source of calories from patties can be generated from the ingredients in the patty, namely fat, carbohydrates and protein. This underlies the preliminary study conducted by the author by distributing questionnaires to 25 respondents. Most of the respondents suggested a new innovation in patty by replacing the patty filling by using vegetable ingredients so as to produce a patty that is lower in calories from the fat element.

The innovation of patty from mung beans and string beans as a basic ingredient for meat substitutes is considered to have good content for the body because it has high protein and has vitamins that are good for the body. Mung beans are high in vitamin b1, vitamin b2, and folate which are beneficial for lowering cholesterol, lowering blood pressure, and can reduce the risk of heart disease. String beans are high in protein, vitamin a, vitamin c, vitamin k, and minerals which are beneficial for improving heart health, improving digestion so as to remove toxic substances from the body, and can reduce high blood pressure.

2.3 Process Review

Pan frying process that is done quickly in a small amount of cooking oil on a flat pan with only one turn of the ingredients. When frying, make sure the oil is hot to the desired temperature. The pan frying cooking technique is the same as the sauteing technique, pan frying also uses a little oil with the aim of lubricating the pan. The difference is in the ingredients used. If sauteing can only be used on food ingredients with small pieces, pan frying is with larger pieces. The ingredients used with this cooking technique must be larger so that the food only needs to be flipped occasionally for even cooking. Examples of foods that can be cooked with pan frying include beef steak and burgers.