

## **CHAPTER II**

### **LITERATURE REVIEW**

#### **2.1 Information About Wheat**

Jusuf (2012) in Sihotang (2015) said that wheat actually grow and producing well in Indonesia, especially in plateau that has cool temperature. In Indonesia, it is usually planted in Java island and North Sumatera. While according to Nurmala (1998) in Indaryati (2014), wheat is cereal plant from grains that is rich of carbohydrate.

According to Samuel (1972) in Kusuma (2015), there are three kinds of wheat, they are:

1. Hard Wheat or T. Aestium

Hard wheat consists of 12-18% protein. It has the characteristics such as brown peel, tough seed, and high water absorbent. This kind of wheat consists of high protein, so it is suitable for making bread. Hard wheat produces good quality flour.



Picture 2.1 Hard Wheat

2. Soft Wheat or T. Compactum

Soft wheat consists of 7-12% and low level of protein. It has white and red colour and soft seed. This kind of wheat is suitable for making cake, because the dough that is produced has low of absorbent level.



Picture 2.2 Soft Wheat

### 3. Durum Wheat or T.Drum

Durum wheat is a special kind of wheat. The characteristics of this wheat are the colour of the inside wheat is yellow, unlike the other wheat and has harder seed, and brown skin, this wheat is usually used to produced pasta.



Picture 2.3 Durum Wheat

In short, wheat contains protein and carbohydrate that is needed by human body. There are three kinds of wheat such as hard wheat, soft wheat, and durum wheat. Three of them have different functions in food making process.

## 2.2 Refined Product of Wheat

Based on Alodokter (2015:1), there are three types of wheat which produce flour, they are:

### 1. Whole Wheat

Whole wheat is unrefined or milled processed, so it still consists of full bran and germ. This wheat is rich in selenium, magnesium, and potassium. The products which are made from the whole wheat are whole wheat flour, whole wheat bread and whole wheat pasta.

### 2. Refined Wheat

Refined wheat is wheat which through milled process to discard the seeds and chaff. Although this wheat is more durable, but the grinding process makes many of the nutrients and fibers in the wheat decrease. The product which are made from refined wheat are white rice, wheat flour, white bread, and various breads.

### 3. Enriched or Fortified Wheat

Enriched or fortified wheat is the wheat with additional nutrients like vitamin B to recover the missing nutrition in the grinding process. However, natural fibers that have been lost are not added back. Meanwhile, there is also an

enriched wheat with certain nutrients, such as folic acid and iron that previously did not exist in its original form. The product which is from enriched wheat is flour to make cookies and cake.

### **2.3 Information About Doughnut**

Doughnut is one of products that use wheat flour as the ingredients. Adhwaa (2012) said that doughnut is bread dough that consists of high protein flour, yeast, eggs, sugar, and butter that are proofed by process of fermentation. Sultan (1969) in Lawe (2013) also said that doughnut is made through process of fermentation. The process of making doughnut is same like making sweet bread which is used mixing method.

There are some nutritions contained in a doughnut. According to Fat Secret (2016), one doughnut contains of 198 calories, 10.76gr fat, 23.36 carbohydrate and 2.35 protein. Whereas Godam (2012) said that in 100gr doughnut contains of 357kg calories, 9.4gr protein, 56.5gr carbohydrate, 10.4gr fat. In short, doughnut contains of carbohydrate, protein and fat that needed in human body.

### **2.4 The Ingredients of Doughnut**

There are six ingredients of doughnut.

#### **1. Wheat Flour**

Wheat flour is the main ingredients for making doughnut. Wheat flour contains protein and carbohydrate. Wheat flour used in making doughnut has high protein. Astawan (2006) in Yaumi (2011) said that wheat flour processed by wheat seed which is grinded. The function of wheat flour is to shape the doughnut. The main protein content of wheat flour which is role in making doughnut is gluten. Gluten can be formed from gliadin and glutenin.



Picture 2.4 Wheat Flour

## 2. Sugar

Sugar is one of the ingredients for making doughnut. Sugar's function is as sweetener in food. According to Mudjajanto and Lili (2004) in Yaumi (2011), sugar that used for making doughnut must dry texture, because it will not make the dough clot. The functions of sugar in making doughnut are giving colour in the dough, sweetener in the doughnut and it makes the dough soft.



Picture 2.5 Sugar

## 3. Fat

Fat is the important component in making doughnut. The kinds of fat that used in making doughnut are margarine and olive oil. The functions of fat itself is to give the aroma in the dough, to soften the doughnut and increase the nutrients. It is line with Wijaya (2002) in Yaumi (2011) said that the functions of fat are to make the doughnut tasteful, increase the aroma and to produce a good doughnut.



Picture 2.6 Fat

## 4. Yeast

Yeast is one of the ingredients for making doughnut. The function of yeast is to make the dough rises. It is line with Mudjajanto and Yuliyanti (2004) in Yaumi (2011), yeast is the ingredient to rises the dough that contain of carbon dioxide. While US. Wheat Associates (1983) in Yaumi (2011), yeast contains several enzyme, they are invertase, maltase and zymase. The function of invertase enzyme in yeast is changing the sugar or sucrose that soluble in water to glucose

and fructose. Mixing yeast with other ingredients in making bread can produce  $\text{CO}_2$ . Yeast can rise, if it is supported by other ingredients like sugar as a source of energy.



Picture 2.7 Yeast

#### 5. Salt

Salt is giving the savoury taste in doughnut dough. The function of salt in making doughnut is to make the doughnut tastier. According to Mudjajanto and Yulianti (2004) in Yaumi (2011), the functions of salt in making doughnut are giving the savoury taste in the doughnut, to increase the sense of other ingredients, to control the time of fermentation, to make the gluten become stronger, adjust colour of the dough and prevent bacteria in the dough. They also said that using salt in making doughnut is no more than 2.25% from the flour, it can retard the fermentation. Salt and yeast cannot be mixed, it can make the microbe in yeast die.



Picture 2.8 Salt

#### 6. Baking Powder

Baking powder used to rise the dough. The function of baking powder are to make the dough rise and keep the doughnut in good condition. It is line with Aliem (1995) in Yaumi (1995), baking powder is the result of acid reaction with bicarbonate natrium. The functions of baking powder are to make the dough rise well and keep the doughnut in good condition.



Picture 2.9 Baking Powder

## **2.5 Information About Banana and Avocado**

### **2.5.1 The Nutritions of Banana**

Banana has many vitamins and nutrients. Banana contains carbohydrate which increase the satiety. Banana also has many advantages for human body, so consuming banana is good for health. According to Mulyanti (2005) in Wardana (2011), banana contains energy, protein, fat, vitamins and minerals and in 100gr banana contains of 75.00gr water, 88.00k energy, 23.00gr carbohydrate, 1.20gr protein, 0.20gr fat, 8.00mg Ca, 28.00mg P, 0.60mg Fe, 439.00mg vitamin A, 0.04mg vitamin B-1, 78.00mg vitamin C. It is line with Mulyanti, Gobelez at all (1973) in Harianie and Djamhuri (2012), banana has many nutrition such as water (75%), protein (1.3%) and fat (0.6%). Banana also contains carbohydrate and potassium (0.24%). Moreover, banana has many benefits to cure many diseases such as fever, convulsions, sprains, etc.

### **2.5.2 The Nutritions of Avocado**

Avocado has many vitamins and minerals that is needed for human body. Consuming avocado can decrease cholesterol because there is omega -3 fatty acid that give many advantage for human body. It is line with California Avocado Commision (2011) in Meutia (2014), avocado contains at least 11 vitamins and 14 minerals. Avocado is rich of protein, riboflavin (vitamin B2), niacin (vitamin B3), potassium (potassium), and vitamin C. Moreover, avocado also contain of omega-3 fatty acids which is give the advantage to keep heart health, decrease cholesterol and food for brain. Similar with Widya and Paimin (1993) in Anova and Kamsina (1993) said that avocado have minerals such as potassium 10 mg, phosphor 20 mg, protein 0,9gr, calorie 85gr, vitamin A 180 IU, vitamin C 13 mg and vitamin D 20 IU.

## **2.6 Definition of Process**

According to Ahyari (2002), process is the way, the method or the technique to implement the particular thing. It is in line with Dinas Kebudayaan DIY (2014) that process is a way, method, and technique of how the real sources

(labour, equipment, material, and fund) is transformed to obtain a result. While Ramli (2008) states that process is a series of systematic steps or the stages which is clear and can be achieved repeatedly to reach the desired result. If reached, each stage is consistently lead to the desired results.

In short, process is the way to make something to be perfect, because the process through various ways which make something be better.

## **2.7 Recipe Book**

According to Perpustakaan Kota Serang (2012), book is a group of papers or other material that is bound in one side and contains of texts or pictures and each side of a paper in the book called a page. According to Saterlat (2014), food recipe is an instruction of arrangement or algorithm that explain how to make one kind of food. Whereas Nurzinah (2013) states that recipe book is an important helping tools to cook, contains information about making food. She also says that recipe has its standard. The standard of recipe book is an instruction that explains the specific of preparing the food using tools and served as pleased. From the explanations above the writer concludes that the definition of recipe book is a book that contains texts and pictures, and it provides the information and the instructions about various food as a guideline for cooking.