

# CHAPTER I

## INTRODUCTION

### 1.1 Background Study

Watermelon [*Citrullus lanatus* (Thunb.) Matsum. & Nakai] is a plant of the family Cucurbitaceae (pumpkins) which are seasonal. Watermelon has been cultivated 4,000 years BC so it is not it's surprising that the consumption of watermelon has spread to all parts of the world. Watermelon plants are widely cultivated by the community, especially in the lowlands, thus giving a lot of benefits to farmers and watermelon entrepreneurs, and can increase improvement of Indonesia's economic system, in particular agriculture. Indonesia get a watermelon export opportunity of 1,000 tons/year, while world market demand will watermelon reached 169,746 tons/year (Fadilah, 2012). Development of watermelon crop production in Indonesia in 2009 reached 474,327 tons, however in 2010 watermelon production only reached 348,631 tonnes (Jasmine, 2014).

There are dozens of varieties/types of watermelon that are cultivated, but only a few types are of interest to farmers/consumers. In Indonesia the varieties that are suitable for cultivation are divided into 2 groups, namely: Local Watermelon (Black Watermelon from Pasuruan, Batu Sengkaling Watermelon and Bojonegoro Watermelon) and Imported Hybrid Watermelon (from hybrid crosses) which have advantages separately. Watermelon is classified according to the pure seed of the country of origin: Yamato seed, Sugar Suika, Cream Suika and others. Watermelon grows in soil rich in organic matter, fertile, loose, and has good aeration and drainage. Topographically, Watermelon is very good, if it is planted in a tropical climate and has a relatively high temperature, and at an altitude between 0-7 meters above sea level. (Wihardjo, Suwandi .1993).

Watermelon has a variety of benefits because watermelon is one of the fat-free fruits and has a water content of 93.4%, 0.5% protein, 5.3% carbohydrates, 0.2% fiber, and vitamin A, vitamin C, vitamins and minerals.

Vitamin B, as well as minerals. Watermelon is a plant that contains high antioxidants, so it can be relied on as a free radical neutralizer and reduces cell damage in the body. Watermelon also contains carotenoids such as lycopene which has benefits for the body and also for skin health to make it look youthful. Watermelon skin/pulp is also rich in vitamins, minerals, enzymes, and chlorophyll. The vitamins found in watermelon skin include vitamin A, vitamin B2, vitamin B6, vitamin E, and vitamin C. The content of vitamin E, vitamin C, and protein which is quite a lot in watermelon skin can be used to smooth skin, hair, and make hair look shiny. While beta-carotene and lycopene found in watermelon skin can be used as antioxidants to tighten facial skin and prevent wrinkles on the face. Watermelon rind contains the amino acid citrulline. Watermelon rind contains more fiber and potassium but contains less. (Perkins, 2004).

In addition, watermelon also contains pectin which is a natural ingredient that is widely found in several foodstuffs, such as fruits and vegetables. Pectin is generally found in the primary cell walls of plants, especially between cellulose and hemicellulose. Pectin substances can absorb water and have been proven effective in making stool texture denser but still soft. So, do not be surprised if this one fiber is able to relieve diarrhea and constipation. (Winarno, 2004). And also Watermelon rind (Albedo) has excellent potential in treating and preventing hypertension. This is due to the high content of citrulline. Even based on research, the content of citrulline is more in the skin of the watermelon than the flesh. Therefore, the use of watermelon rind needs to be widely disseminated to the public, so that something that is considered waste can be taken advantage of properly. ( Trisnayadi, 2020).

The reason behind choosing watermelon rind is that its use is very limited in the wider community, especially only discarded after processing and only taking part of the flesh, even though there are many useful substances in it, and can be obtained by buying any variant of watermelon. Like most fruit peels that are just thrown away, this skin is only mostly used for food carving.

## **1.2 Objectives of The Study**

1. Requirements to continue the intership program
2. Explore the benefits of Watermelon Skin
3. Know the nutrients contained in Watermelon Skin

## **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 new fruit innovation for people