

CHAPTER 1

INTRODUCTION

1.1. Background

Legumes are the word used to describe a plant with pod used as a container for its fruit or have an unusual flower structure, with some having the ability to form nodules with rhizobia. Legumes itself is composed of several subfamilies, covering 600 genera and more than 13.000 species. Lentils, nuts, and pea are some of the examples of legumes that is sometimes confused with as an entirely different plant category. Legumes that are cultured specifically to be dried seed are named as Pulses, including dried pea or dried beans. Pulses do not include fresh seeds (Graham, 2003).

Although it has many benefits, the sole consumption of legumes to fulfill the body needs is not recommended. The lack of essential amino acids can lead to nutritional deficiency. Legumes also contain iron, but in a non – heme form, making it harder to enter the bloodstream from the digestive tract than the heme iron that comes from meat (Annigan, 2018). Despite legumes having high mineral content, its bioavailability is poor, one of which is caused by Phytate; the main inhibitor for Fe and Zn absorption (Sandberg, 2002).

Based on the report of Sitou Akibode and Mywish Maredia, (2011), on Legumes crop, the history of pulses consumption and production is on a rapid, declining trend from 1970 to 2002, pointing that seeing in the long term of per capita pulse consumption can be a downright, declining trends. They also mentioned in their report about the top 50 producers of pulse producer in the world with Indonesia placed on the 24th, producing 325.34000 tons of legumes on average. But for the consumption in per capita, Indonesia is one of the lowest (1.46 kg/year) compared to the highest which is Niger (34 kg/year). Thus, the consumption rate for legumes is needed to be raised, as legumes are a rich source of nutrients, widely available in Indonesia, and can contribute to tackling nutritional deficiency.

In 2018, a report about “Direktori Pengembangan Konsumsi Pangan” by Hariyanto showed the rate of consumption of foods in Indonesia. Legumes or “Kacang – kacang” in Bahasa is also mentioned several times. In the graph of “Capaian Pemenuhan Pangan” or the Food Intake Rate from 2015 to 2017, it shows that legumes (40% of the minimum intake) are the second lowest after tubers (20% of the minimum intake) compared with the other foods. While in another graph on the Categorized Food Consumption Growth (Perkembangan Konsumsi Kelompok Pangan) during the period 2013 - 2017 the consumption for legumes (23-25 gram/capita/day) is also very low, almost the same as with sugars (25-30 gram/capita/day), oil / fats (25-29 gram/capita/day) and oily fruit/seeds (6-8 gram/capita/day).

Study done by Kosaka (2018), on dietary and energy intake pattern in Bandung and Sumedang shows low legumes and vegetables consumption, not only among adults but also among adolescent and children as well, with the age of 5 – 19 years old. Based on the graph, adolescents and children energy intake median from legumes if combined only stand on below 10% compared to adults that can go as 15% or more.

While data from Jati, (2012) shows the type of food commonly consumed in Indonesia. The list of food includes legumes, categorized together with vegetables. Even though the consumption rate is still low, legumes that are commonly consumed are beans, mung bean, soybean, and kidney bean a.

The data for legumes consumption within the dietary pattern among adolescents is still lacking and an investigation is needed to increase data available that can be used as a base for future research. The adolescent is chosen as a research subject as their nutrition requirements are high during this period and their flexibility in changing diet pattern.

1.2. Objectives

To assess adolescents' behavior and perception towards eating legumes, in terms of the legume types, cooking preparation used, portions consumed and the consumption frequency, in Jakarta and Pontianak.

1.3. Benefits of the Study

The findings of the study would provide benefits to:

- **The body of knowledge.** This gives them information on legumes consumption, as well as food choices of adolescents both in Jakarta and Pontianak. Study finding can also contribute as supplementary literature for further research.
- **The academia.** This gives a contribution for further research in legumes consumption and legumes role in fulfilling adolescent nutrient intake, trigger research development in consumption, production, processing, and preservation which can be continued or replicated.
- **The society.** This will help society in discovering the importance of legumes within a healthy and balanced diet, leading to a healthier life.