

CHAPTER 1

INTRODUCTION

1.1 Background of The Study

Yogurt is a fermented milk using probiotics, such as *Lactobacillus bulgaricus* and *Lactococcus thermophilus*, which are called as yogurt cultures/starter. Mostly, the milk used in yogurt is cow's milk, but it can be varying from goat, sheep, horse, camel, buffalo, or even yak. Each type of milk will produce different results.

Yogurt from animal milk is well-known for its health benefits. It is packed with protein and important minerals, such as calcium, phosphorus, magnesium, potassium, vitamin B2 (riboflavin) and B12 (cyanocobalamin), and sometimes fortified with vitamin D. Yogurt is good for digestive health, heart health, immune system, and protecting against osteoporosis. Probiotics in the yogurt may also improve nutrition absorption in the gut.

Due to health issues and personal preferences, such as lactose intolerance, milk allergy, veganism (vegetarianism which abstain from eating and using any of animal product), ovo-veganism (vegetarianism which allows eating eggs but not dairy products), and other dangerous disease; people are shifting from consuming dairy products. Soy and almond milk are the popular alternative for those who do not consume dairy milk. However, *Vigna radiata* or mung bean is also a good choice as it has less fat and higher in sodium than soy and almond has, but still containing high protein. It has a good reputation that there are no reported cases of allergic reactions to mung bean worldwide.

With the benefits of mung bean, Bean-Yo should contain healthy nutrients and rich in antioxidants, lower cholesterol to reduce heart disease risk, prevent heat stroke, reduce blood pressure, aid digestive health, lower blood sugar level, suppress hunger and raise fullness hormones, and support a healthy pregnancy.

1.2 The Objective of The Study

Prior to this, non-dairy yogurt products from beans or nuts only come from soy milk and almond milk. Both soy milk and almond milk are a good replacement for dairy milk, but they still have their own flaw.

Soy is popular to replace animal products due to its high source of protein. However, consuming too much of soy can cause unfortunate effects. The effects are causing suppression of thyroid function, flatulence (intestinal gas) and diarrhea, and soy allergy triggered by soy protein (glycinin and beta-conglycinin).

Almond has some of the health benefits that mung bean has too, such as having an impressive nutrient profile, loaded with antioxidants, assisting blood sugar control, lower blood pressure level, lower cholesterol levels, preventing cholesterol, reducing hunger, and being effective for weight loss; but still, almond is included as an expensive superfood in Indonesia.

As a fellow superfood, mung bean does not have any side effect if it is consumed too much unlike soy, and cost much less than almond. Thus, mung bean may be a better alternative for creating a non-dairy yogurt, rather than soy and almond. This research and development product, Bean-Yo mung bean yogurt, aims to be a solution for people with health issues and personal preferences who do not consume dairy yogurt, but still want to experience the benefits of it.

1.3 The Benefits of The Study

Bean-Yo is created in order to give everyone, regardless of age, the benefits from consuming mung bean and yogurt. Through this study, Bean-Yo is introducing a new kind of plant-based yogurt, as well as introducing our business plan. It is hoped that reading this study may give knowledge of yogurt that it could be made not only from dairy products, but also from plant based ingredients.