

UNIVERSITI TEKNOLOGI MARA

**COCONUT AUTOMATIC MACHINE
GRINDER**

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ABSTRACT

Coconut is one of the main ingredients in the food industry, especially coconut milk and grated coconut. The existing coconut grater require a lot of energy to handle the machine and the safety is highly questionable. In order to overcome that problem, machine was design to grated coconut automatically and increase its safety. Therefore, morphological and Pugh chart approaches was used to finalize the design of machine. Then, the finalize design will be analyzed to ensure that the machine could withstand the force exerted from the coconut and the grater. From the result, it is expected that the machine could withstand force exerted from the coconut and the grater. It can be concluded that, this project would be success when the machine able to grater the coconut automatically.

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CHAPTER ONE INTRODUCTION

1.1 Background of Study

Coconut is one of the most widely utilized components in the culinary world, especially in baking and cooking. Besides that, coconut is also known as a plant that has a million benefits. starting from coconut wood, leaves, coconut fruit, and coconut water. Coconut itself is a very common food to consume. It can directly consume coconut meat or process it first to get coconut milk. When the coconut milk has been squeezed, the dried coconut grating also provides us with usefulness and nutrients.

Grated coconut can improve brain function because there is some research that states that eating grated coconut can prevent us from getting Alzheimer's disease. Besides that, with the selenium content in grated coconut, the immune system will increase. Because selenium produces selenoproteins that help fight many diseases. In the Malaysian industry, coconut grating machines already exist, but it must be done manually. So, for this project I would like to create a coconut grating machine that can be function automatically.

1.2 Problem Statement

This product has been available in the Malaysian industry. Yet it has problems that can be raised, especially in terms of safety and energy to grate the coconut. In terms of energy, to use the coconut machine, the user needs to spend their energy holding the coconut while the grater is rotating. It takes some time to get fully done. So, the user needs to hold the coconut until it's done. Besides that, in terms of safety, the position of the user's hand is very close to the grater. The surface of the grater is very sharp, and it rotates at an average speed of 1200–1400 rpm. So, the risk of an accident is high. Furthermore, the size of coconut grater machines in the Malaysian market is mostly large and not suitable for use at home.