

UNIVERSITI TEKNOLOGI MARA

**DESIGN AND FABRICATION OF YOUNG COCONUT
JELLY PEELING MACHINE**

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ABSTRACT

The use of young coconut jelly is very popular among people worldwide. The young coconut jelly often used in food and beverages product. The method of peeling the young coconut jelly has been an innovation from year to year. Many innovations product has been in the market to make the process of peeling the young coconut jelly easier. This project was initiated to design and fabricate young coconut filling peeler machine. The purpose of the design was to make the process of peeling the jelly of the young coconut easier so that it can save more energy and make the work faster. The design was based on the electric coconut scrapper machine and the portable coconut scrapper that has blade with the addition of holder and safety mechanism. With this, the blade will peel the young coconut jelly automatically while the holder will hold the coconut so that the person that use this machine will not hold the coconut while the peeling process is ongoing. The purpose of the safety mechanism is to add safety to the person that operating this machine. This machine uses a rod to rotate the blade and scoop that will peel the young coconut jelly. Motor is used to move the rod in rotational motion.

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CHAPTER ONE

INTRODUCTION

1.1 Background of Study

Coconut jelly peeling machine is a specialized device designed to efficiently remove the young coconut jelly from the shell of coconuts. This machine typically employs rotating blades or abrasive surfaces to strip away the coconut jelly from the shell that is stick to the coconut shell or inner surface. Many attempts have been made over the years to automate the process of peeling coconuts jelly, which is currently accomplished by hand and with the use of sharp instruments. The majority of machines on the market today are electrically powered devices meant for industrial use. It may appear advantageous since it saves time, but because it is costly and results in a large electrical bill, it was not regarded as cost-effective. For these reasons, a mechanically powered coconut jelly peeling machine is considered advantageous for home and small business applications. [1]

The common issues related to this project is that the trimming process of the coconut jelly which is quite dangerous. The young coconut is manually peeled with a spike or a machete. These techniques were exhausting to employ and required skilful labour. To help with the peeling of young coconuts jelly on the market, numerous machines have been devised. Nevertheless, the current machine is costly and challenging to operate. [2] Another issue related to this project is usually common people use spoon to extract the jelly. This method is less dangerous than the other method, but this way also has its own cons that is related to the food hygiene.

Coconut jelly peeling machine has been invented to solve this problem. The machine is designed like a lathe machine to trim coconut shell and get the coconut fill. The blade is used to cut the coconut shell by using lathe machine concept and extract the jelly out of the shell. [3] [4]