UNIVERSITI TEKNOLOGI MARA

FABRICATION OF COCONUT SCRAPER MACHINE

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ABSTRACT

The month of Ramadan is ending and people are getting ready to celebrate Hari Raya. There are many foods that need to be made ready for the upcoming event. One of it is coconut milk which can be made with the coconut meat. Harvesting grated coconut flesh can pose several challenges, especially in traditional methods where it's done manually. Grating coconut flesh manually requires significant physical effort, especially if large quantities are needed. This can be particularly challenging for farmers or individuals who rely on manual labour for coconut processing. There is manual coconut scraper to help get the coconut meat but it takes manual labour and is time consuming. There is also automated version that use a motor to help harvest the coconut meat but the user needs to be cautious and very careful since there is no holder to help hold the coconut without risking one's safety. Therefore, I will create a new automated one which is safe and efficient for the user to use. It will have motor since it's automated and for the safety feature, it will have some kind of mechanical stand to help the user to harvest the coconut meat without the risk of injuring their hands.

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CHAPTER ONE
INTRODUCTION

1.1 Background of Study

In Asian coconut milk is a widely used ingredient in cuisines and is prized for its creamy texture and rich flavour. It is commonly used in both savoury and sweet dishes, adding depth and richness to curries, soups, desserts, and beverages. Coconut milk is incredibly versatile and can be used in a wide range of dishes. In savoury dishes, it is often used as a base for curries, soups, and stews, adding creaminess and flavour. In desserts, coconut milk is used to make treats like coconut ice cream, coconut rice pudding, and various sweet snacks.

One modern solution to harvesting grated coconut flesh efficiently is through the use of electric coconut graters. These machines are designed to automate the grating process, reducing the need for manual labour and increasing productivity. Electric coconut graters are powered by electricity, either through a power cord or rechargeable batteries. This eliminates the need for manual grating, making the process faster and less labour-intensive.

While electric coconut graters offer convenience and efficiency, there are some safety concerns associated with their use. Such as rotating blades or discs that can cause serious injury if they come into contact with fingers or hands. Users need to exercise caution when operating the machine and avoid placing their hands near the moving parts. Hence, the current design should be improved with better safety for its users in the near future.

The aim of this study is to design a safer and efficient coconut grater. The design process will be conducted by referring to a standard engineering design process and the chosen concept will be rendered and modelled using SolidWorks 2019.By improving the safety problem of the standard design, the use shall feel more relieved and do not have to be cautious when trying to acquire some grated coconut flesh.