

UNIVERSITI TEKNOLOGI MARA

**DESIGN, ANALYSIS AND FABRICATION OF
MANUAL FOOD SLICER MACHINE**

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ABSTRACT

Food preparation is an important part in food industry. Not only that, but many people in every house also tend to have a safety problem and says that it is time consuming if we used only a knife to cut and it is hard to handle for some certain people which not really good in kitchen. Therefore, the purpose of this project is to design, analyse and fabricate the manual food slicer machine. Most of the food processor is imported and of course it is costly. For this project, the manual food slicer machine will be able to apply for fresh food such as vegetables and fruits. The development of this machine begins by identifying problems that occurs to people who have problem in kitchens. Then, studies on the food processor that available in market which are directly related are next in line. Then, the machine is design based on the concept adapted from the problems faced. Next, careful material selection process begins to make sure the material used is safe for user and easy to be washed. Next process is which comparison of different type of slicer machines are done and followed by data collected from the survey that have done. After that, in Final Year Project 2, the process of fabricating is done for 14 weeks.

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CHAPTER ONE

INTRODUCTION

1.1 Background of Study

The design of a manually operated slicing machine is required to create a machine that is both portable and powerful in comparison to its size. To optimize outputs, industries are working hard to increase machine efficiencies. The better the efficiency, the more energy and cost savings are realized. As a result, the profit will increase directly. However, the higher the efficiency of a manual machine, the easier it is to operate because it requires less energy. The durability, efficiency, weight, speed, or cost of an existing equipment may need to be upgraded. Furthermore, from the data collected, 8/10 people have problems with a risk of injured their finger when cutting. Other than that, time consuming and hard to handle. The aims of this manually operated product is to further improve the processing food in cutting and to determine the appropriate material for designing the slicer machine in terms of cost and material that will not affect the quality of the food. With the development of this machine, it will make us to cut food in easier way.

1.2 Problem Statement

This machine enables the convenience of to cut foods by only hand driven and directly will reduces the home electricity consumption and saves energy. Furthermore, many people have faced the problem in cutting food which are their fingers will easily be cut. Not only that, most of the slicing machine that available in the market usually imported and surely be expensive. Thus, the idea came with a solution to make a manual food slicer machine that is portable, easy to handle, easy to wash and cheaper.

1.3 Objectives

The main objectives of this project are:

- a. To improve the processing food in cutting that will be manually operated.
- b. To determine the suitable material used in designing the slicer machine in terms of cost and material which will not interfere with the food quality.