

**UNIVERSITI TEKNOLOGI MARA**

**FRUIT AND VEGETABLE SLICER**

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## **ABSTRACT**

This project introduces fruit and vegetable slicer, aiming to change the old and inefficient of manual slicing methods. The objective is to develop a device or machine that make the slicing process and enhances productivity. The project can advance precision cutting mechanisms, and user-friendly to achieve this goal. High-speed rotating blades, automatic , and cost saving are integrated into the slicer to ensure consistent and accurate slicing of fruits and vegetables. Slicing may help in the extraction of desirable constituents from raw materials easily due to its reduction in size [3] .The anticipated outcome is a neat slicer of fruit and vegetable that significantly reduces preparation time and effort while promoting kitchen safety. Additionally, the device is expected to deliver visual appealing and precise slices for culinary purposes. By improving food preparation in both professional and home kitchens, the automatic fruit and vegetable slicer has the potential to optimize productivity, creativity, and overall enjoyment in the culinary domain.

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# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of Study

Clarke (1987)[1] reported that several slicing and chipping machines have been designed and tested in various developing countries especially the Caribbean and Southeast Asian countries. The foundation of fruit and vegetable slicers from the need to overcome some of the challenges associated with manual slicing methods. Traditional methods of cutting fruits and vegetables can be time-consuming and are prone to accidents and injuries. To solve these problems, the concept of a slicers appeared, focusing on easier cutting, saving costs, saving time, and preventing injuries.

One of the main driving forces behind the development of automatic slicers was the simplification of the cutting process. Manual slicing often requires skill, practice, and physical effort, making it difficult for those with limited skill or strength. By automating slicing, slicers make food preparation easier and more accessible, wider range of users, including those with physical limitations. Determination of some Physical properties of fruit & vegetables are important for development of any kind of handling equipment (Mohsenin, N.N. 1986) [ 5].

In addition to being easy to use, the slicers aim to reduce the total cost of food preparation. By through the slicing process, it eliminates the need for multiple specialized knives and cutting tools. This cost-effective method makes slicers a good choice for professional kitchens and home environments where time and profit are valued. As example Ukatu and Aboaba (1996)[9] designed, constructed, and evaluated a machine for slicing yam.

Saving time is another important aspect of a slicers. By the cutting process, it greatly reduces food preparation time. This is especially beneficial for kitchens where speed and efficiency are needed. Additionally, in the home kitchen, the time saved can save time especially to busy individuals and families, allowing for more efficient meal preparation.

Safety is another important factor driving the development of the machine. Manual cutting using a knife can be dangerous, especially for those with limited experience . Automatic slicers reduce the risk of injury by making safety features such as cover of the blade. These safety measures protect users from accidental cuts, providing a safer cutting experience. Slices are then cut off with the hinged cutting blade [8].