UNIVERSITI TEKNOLOGI MARA

DESIGN AND FABRICATION OF VEGETABLE SLICING MACHINE

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ABSTRACT

The final year project is an important component that allows students in the fifth semester of Mechanical Engineering to demonstrate advanced knowledge of a specialized field that is required for a career in research and development, and it includes project planning, literature review, project implementation, technical writing, and oral presentation all within a set time frame. The title of my final year project is the Design and Fabrication of Vegetable Slicing Machine. A vegetable slicing machine is a machine that allows the user to perform multiple tasks with one device. A survey of 20 people will be conducted in order to study and identify the machine's specifications based on customer preferences. According to the survey results, we could discover on what is the most important criterion for an automated multipurpose vegetable slicing machine. This project presents the development of vegetable slicing machine to cutting a large number of vegetables into smaller pieces in a short amount of time and user-friendly machine.

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INTRODUCTION

1.1 Background of study

The most popular tools for slicing and grating vegetables like peppers, tomatoes, carrots, onions and lettuce were a knife and a plastic grater. The world's first automated vegetable cutting machine was created in the early 1960s. The technology for slicing has been developed. In the 1970s, most slicers had matured to the point that they could handle mono-crystal with large dimensions up to 125mm in diameter. With the introduction of automatic multi-function slicers in the 1980s, slicing technology reached its pinnacle of growth. [1][2]

It is difficult for those who need to cut a large number of vegetables into smaller pieces in a short amount of time. As a result of carelessness, it may also result in injuries. Slicing technology has evolved over time to address these issues. The slicing machine was created to make cutting vegetables easier, to save time, and to prevent injuries when using a knife. [3][4]

A manual or automated vegetable slicing machine is available. The manual vegetable slicing machine is designed to be low-cost to operate because it does not require electricity. It is also safer, more consistent, and more affordable. It is, however, time consuming and inefficient. The basic components of an automated slicing machine are the base, which houses the motor, the feeder part, the feeder mouth, which houses the presser, and the cutting knife, which is carried by the cutting plate. It enables the user to precisely cut a large number of vegetables in a short amount of time. When it comes to maintenance, however, it is more expensive and difficult. [3][5]

The goal of this project is to create an automated multipurpose vegetable slicing machine. The goal of this project is to create a compact, functional, safe, and user-friendly automatic vegetable slicing machine that can perform a variety of tasks.