UNIVERSITI TEKNOLOGI MARA

FABRICATION ANALYSIS OF FRUIT WASHING MACHINE

NURUL SHAIRA BINTI MASWAN

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ABSTRACT

A fruit washing machine is a machine that can wash the fruits that have just been picked from the ground. In today's world, it's becoming the most important machine that all farmers need to have. This approach is more dependable in terms of processing time, hygiene, and safety, and it needs a few little processing steps. The process of designing, fabricating, and analyzing a portable mock up model washing machine. Other than that, this project will feature more than one nozzle, which will increase the hygiene of the fruit. Last but not least, the expected result is it will reduce the time washing the fruit since it will have more than one nozzle.

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INTRODUCTION

1.1 Background of Study

Raw fruits and vegetables can sometimes contain potentially harmful bacteria that can make you and your family sick, such as Salmonella, E. coli, and Listeria. According to the CDC, bacteria in fresh produce cause a significant portion of food borne illness in the United States. Cooked produce is the safest to eat, followed by washed vegetables [1]. However, due to financial constraints, not all farmers, particularly small farmers, can wash fruits and vegetables in sufficient numbers.

A fruit washing machine, on the other hand, is not the only item that every farmer must have. In reality, when there are too many plants, farmers must purchase fertilizer, sow seeds, plant watering gadgets, and pay labor. This is because each plant gets a great deal of attention. If farmers take this for granted, the issue arises as to whether there are any insects or animals that can destroy the crops and influence the farmer's crops' development. This project intends to invent and fabricate a simpler fruit washer. The fruit washer will be low in cost and will be easier to use by the farmers. For example, if a large number of people use this type of machine, it will minimize the cost and time spent washing fruit, so saving various countries, budgets.

The fruit washer comprises a tank containing water into which the fruits or vegetables are fed, and equipped with means for agitating the water, but it is found that such mechanical devices often bruise and damage the fruits and vegetables to a serious extent. The damaged fruit will not be sold, resulting in a loss for the farmer. By designing and fabricating a fruit washing machine, the study aims to improve the quality of products and increase profits for small farmers. The machine is made of stainless steel to ensure quality and has a high washing capacity and efficiency. Safety, ease of operation and maintenance, and ergonomic value have also been considered.