

UNIVERSITI TEKNOLOGI MARA

**DEVELOPMENT OF CUTTING
GRASS MACHINE FOR SEMI
AUTONOMOUS MOBILE DRIVE**

**MUHAMMAD IZZAT HAFIZI BIN MOHD
TAUFEK**

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ABSTRACT

Cutting grass is a common work nowadays in order to make sure that people can tidy their own lawn or held a big event such as sports, wedding ceremony and etc. The issue with this work is that it takes a long time and a lot of manpower to lawn the entire area, especially for a large event. The goal of this project is to reduce the amount of human effort and work time required to complete a single task without stepping on the lawn, and to develop a dynamic model that can be attached to a semi-autonomous mobile drive. This project also necessitates the use of a welding and a cutting process to create the model. As a result, a semi-autonomous grass cutting machine is developed, with the operator controlling the machine via a remote control. In conclusion, the project's goal has been met, and the authors discussed the benefits and points to consider when working on the system.

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CHAPTER ONE

INTRODUCTION

1.1 Background of Study

This project is to fabricate a cutting grass machine that can attach to semi-autonomous mobile drive and can be operated by human without using lot of force and man power. People used to have their land to build a farm that or make their house to look more elegant or luxury by make their lawn clean and tidy. In order to do that, they need a tool to maintaining the grow of the grass. Long grass can be an obstacle for human to move in their land and also can become dangerous because it can be a home to venomous animal. They need to cut the grass so people can use the land without any obstacle to do work such as farming, hold an event or make a beautiful recreational park. Therefore, human has invented a cutting grass mechanism to simplify the work and the mechanism is very easy to use. Day by day, grass cutting machine start to evolve and start using a motor or engine to move the blade with more speed and power that makes the time of work will be reduce. The area that needs to cut also will be increase but it still needs a big man power to make the machine fully work. Because of its usefulness which gives so many advantages, it has been a high demand product to human for taking care their lands.

1.2 Problem Statement

Every machine has a disadvantage that can be improve by doing research to make it a better machine. In this state, cutting grass machine need to use a very big energy cut the grass in one area. This happen because standard cutting grass machine need to use a man power to move and that will be exhausting to people. As example, cutting grass is a basic or standard maintenance for a farm and cutting a grass have a limited man power to operate the process like work force and weather problems. This is because a farmer may have a farm that too big to manage by human as we know farm need to do maintenance at least one