

**UNIVERSITI TEKNOLOGI MARA**

**DESIGN AND FABRICATION OF  
AGRICULTURE WHEEL PUMP**

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## **ABSTRACT**

The main purpose of producing this product is to enable farmers and gardeners to make the process of spraying waters, pesticides and herbicides to their gardens becomes more effective. It helps the farmers and gardeners work because they no longer need to carry the tank on their back that can cause their back strain and hurt. This product only has to be push to forward just like how the trolley function and then it will generate mechanically pump by the set of power transmission part by using shaft, bearings and set of sprockets. Energy to pump the tank pump can be reduced. Next, it also comes with a some of nozzles on the wing. With nozzles on the wing, it can speed up the spraying process as it can spray left and right side at the same time. In conclusion, this product can help farmers gardeners in terms of comfort during spraying, reducing energy to pump tanks, and effectively utilizing spraying time. The expected result for this project is, with this project the farmer will take lees time and energy in spraying process.

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# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Background of Study**

Basically, the target people community in this project is more for small farmers and gardeners who still use the agriculture pump to make the process of spraying water, pesticides, and herbicide. We determine that most farmers and gardeners will have back strain and hurt because they have to carry the heavy tank in their back to do the spraying process to their plants. Moreover, using the normal agriculture pump, they need a lot of time to do their work because the pump only has one nozzle. they also need a lot of energy to carry the tank on their back.

This project for improvise the existing agriculture pump. With adding the wheel to the agriculture pump now the farmers and gardeners don't need to carry the pump on their back, they just need to push it forward just like how the trolley function, and then it will generate a mechanically pump by the set of power transmission part by using shaft, bearings and set of sprockets. Usually, gardeners need to do the watering spraying process every day while the pesticide and herbicide spraying process at least once a week.

### **1.2 Problem Statement**

The existing agriculture pump is heavy and difficult to transport. Next, the sprayers that today's farmers employ to spray their farms require an inordinate amount of time to do the task. After then, the existing poison sprayer is less effective because it only has one host and one spray nozzle and they must guide the nozzle directly at the plant. They also need to bend a little bit because when they need to carry up the heavy sprayer that can cause strain on their back. In addition, only can load with the small amount of water, pesticide, herbicide.