

**UNIVERSITI TEKNOLOGI MARA**

**DESIGN AND FABRICATION OF  
WHEEL PUMP  
SPRAYER**

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## **ABSTRACT**

In the agricultural sector most, farmers use traditional ways to manage their crops. They use backpack sprayers and fuel operated sprays. This becomes time consuming, costly, and human fatigue is major concern, these problems can be overcome by using wheel pump sprayer. With this project, farmers no longer need to carry the sprayer tank on their back which can cause their back hurt and discomfort. users just need to push forward like they are using a trolley to use this project and then it will generate mechanically pump by the set of power transmission part by using shaft, bearings and set of sprockets. The process of spraying the poison will be faster with the nozzle in the middle, left and right because it can spray to the left and right areas at the same time. A wheel pump sprayer can have multiple nozzles that are strategically placed to ensure uniform distribution of pesticides or other chemicals. The multi-nozzle system can also help reduce pesticide wastage. The pesticide application mechanism in a wheel pump sprayer is designed to apply the pesticide directly to the target plant foliage. mechanism is generally designed to ensure that the pesticide is evenly distributed. The slider-crank mechanism is used in wheel pump sprayers to convert rotary motion into reciprocating motion to operate the pump. This mechanism ensures a continuous flow of pesticide at the required pressure and height. In other words, this project can help farmers reduce costs, reduce energy to pump sprayer tanks and save time. Additionally, the use of a wheel pump sprayer can help reduce the environmental impact of pesticide use by ensuring that the chemicals are applied only where they are needed and in the correct amounts.

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