

# Design and Fabrication of Battery Operated Agricultural Weeder

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**Abstract:** To prepare a portable weed removing machine for agricultural land and to reduce the human effort of weed elimination and to create a machine for low cost. It would be save the time of farmers and increase the productivity of food varieties. Our aim is to make an effective design of weed removing machine is to minimize the time taken for removing weed present between the growing plants. It is mainly focused to increase the growth rate of plants. This is clear that now a days most of the farmer are use hand weeder from field and garden. It is very difficult for the farmer to buy expensive machine. So our team is make battery operated weeder. Specially we use aluminium frame and plastic gear.

**Keywords:** Agricultural, Weeder, blade, Motor

## 1. Introduction

Agriculture is play important role in our life and nation without agriculture life is not so easy. So that there are various farm machines are available in the market. Most of farmer in india are use hand weeder for removing the weed from the field because they cannot be able to buy expensive tool or machine. In this machine when we switch on then the battery power supply to motor the motor rotate the shaft and shaft rotate the arm and due to rotation of arm blade areenters in field land with its sharp edges. removed grass and make soft favor which is useful for growth of plant. So this weeder cycle is most useful to farmers.

## 2. Literature review

Agriculture is most important in our country.it can be help in to the growth of the country.in india most of the farmer are using hand weeder and this method is very old method of removing of weed from the field. It can be take more time and more effort to do this work and it is the time taken process. We introduce this weeder to reduce the effort of the farmer and increase the rate of weed removing procees. When we use this weeder the battery can supply the power to the motor and this motor can rotate the shaft. With the help of this shaft arm can be move. Due moving of this arm blade are enter into the land with its sharp edge. Remove grass and make soil shoft which is useful for plant growth. So this weeder is useful to farmer and also for gardener [1].

Where weeder are continuously pushed, V-shape sweep is preferred and tool geometry of these cutting blades is based on

soil-tool-plant interactions. Though many manually operated weeders are available they are not popular because farmers feel it to be heavy as compared to conventional [2].

The aim of the project is to design, construct and test, to provide the best opportunity for the crop to establish itself after planting and to grow vigorously up to the time of harvesting [3].

## 3. Conclusion from literature review

The main motive of this weeder to provide less costly machine to the poor farmer to better growth. It is less costly and time saving device for the farmer.

## 4. Gap Observed

The project in which we are working that is efficient, but during rain battery and switch create problem.

## 5. Proposed methodology

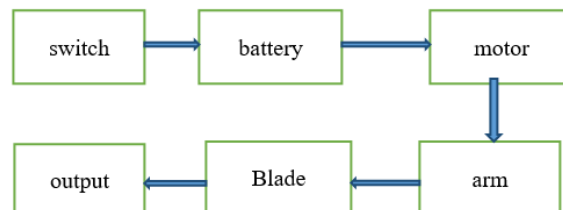


Fig. 1. Block diagram of agriculture weeder



Fig. 2. Battery operated agriculture weeder

## 6. Components of the Agriculture Weeder

### A. Battery

12-volt battery are used in this project to supply power to motor.

### B. Motor

Wiper motor which are used to rotate the shaft.

C. *Cultivation blade*

This blade is used to remove the weed and dig the soil.

**7. Conclusion**

On the whole project we focused to increase the weeding process. This is less costly and time saving device for the farmer.

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