

AUTOMATIC CULTIVATION

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Abstract: The procedure of planting seeds takes a long time in the agriculture industry. Additionally, extra labour is needed for seed sowing. Consequently, the cost of farming as a whole rises. The yield is impacted by the conventional seed sowing machines' increased seed consumption and seed density per unit area. Additionally, using traditional seed-sowing equipment with the ridge-and-furrow technique has limitations. However, farmers embrace the ridge and furrow method to lessen the risk of draught brought on by the unpredictable rainy season and for irrigation purposes. In this study, efforts are made to create a seed-planting machine that is appropriate for the ridge-and-furrow method, as well as to plant the seed at a given distance, in a specific number, and to minimise.

I. INTRODUCTION

Due to liberalisation and globalisation, the agriculture sector is altering the socioeconomic environment of the population. The primary purpose of planting operations is to plant little plants in rows at the appropriate depth, and to keep the two plants separated from one another. A planting machine is a tool used to sow seeds. Planting machines promote consistent plant distribution, save labour costs, and save time.

A planting machine is a tool that assists farmers in saving time and money by assisting in the planting of vegetable and sugarcane plants at the correct location. The primary functions of a planting machine are to plant rows of vegetable and sugarcane plants at the required depth and plant-to-plant separation, then to cover the plants with soil.

The agriculture industry is modifying the socioeconomic environment of the population as a result of liberalisation and globalisation. Planting activities are primarily intended to place little plants in rows at the proper depth, and to maintain the two plants' segregation. A gadget used to plant seeds is known as a planting machine. Planting devices facilitate even plant distribution, reduce labour costs, and accelerate the planting process.

A planting machine is an equipment that helps farmers save time and money by helping to plant sugarcane and vegetable plants in the proper place. A planting machine's main tasks include spacing out rows of vegetable and sugarcane plants so that they are as far apart as necessary and then covering the plants with soil

II. METHODOLOGY

Planting machines are used to facilitate the planting of crops on a large scale. There are various types of planting machines available depending on the crop to be planted and the desired planting method. Here are the general steps involved in using a planting machine:

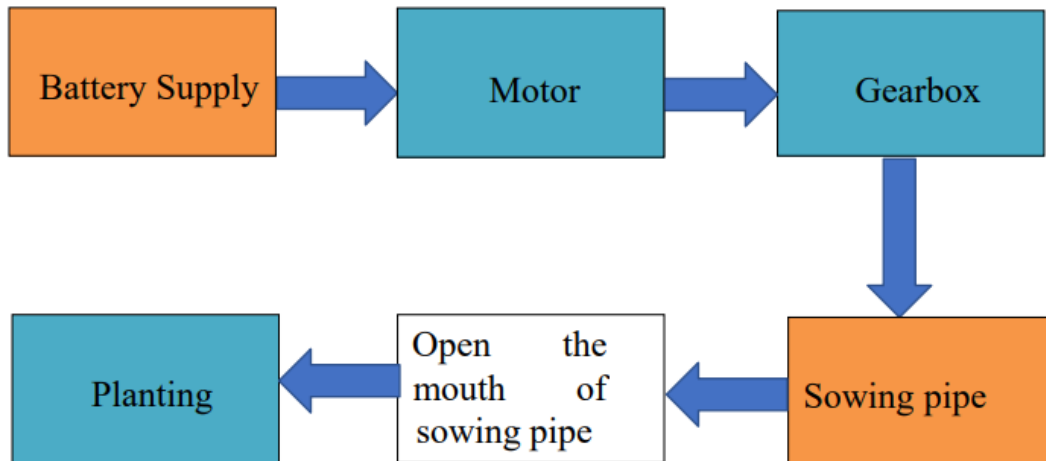
Part 1: Soil preparation: Before planting, the soil needs to be properly prepared. This may involve tilling, plowing, or harrowing the soil to create a suitable seedbed.

Part 2 : Filling the planter: The planting machine needs to be filled with the appropriate seeds or seedlings. This may require calibration of the machine to ensure that the seeds are being distributed at the desired rate.

Part 3 : Adjusting the planting depth: The planting depth of the machine needs to be adjusted based on the crop being planted and the soil conditions. This will ensure that the seeds are being planted at the appropriate depth for optimal growth.

Part 4 :Operating the machine: The planting machine is typically pulled behind a tractor and operated by a driver. The driver will need to carefully navigate the field and monitor the machine to ensure that it is planting the seeds properly.

Part 5 : Post-planting activities: After planting, the field may need to be irrigated, fertilized, or treated with herbicides to promote plant growth and prevent weed growth. Overall, the use of a planting machine can significantly increase the efficiency of planting crops on a large scale, reducing the need for manual labor and improving the accuracy of seed placement.

I. DESIGN CONSIDERATION & BLOCK DIAGRAM

Above block diagram shows the construction of planting machine. First we give the supply to the motor. supply is fed from battery. This supply is single phase 230v . Wiper motor is used for this. Gearbox - gearbox control the speed of motor. Then the sowing pipe moves up and down. Open the mouth of sowing pipe. And finally planting is done.

ADVANTAGES:

It saves labour charge.

- It saves working time and saving on cost of operation as compared to conventional method of previous country plough.
- It is light in weight as compared to present devices.
- It reduced the use of man power up to 50-60 percent.
- It is cheaper so poorer farmer can also afford this new devices.
- The plough enters in to the soil and automatic dropping of seeds takes place.
- It can be used also for several seed

LIMITATIONS:

One battery charge at one time.

- Limited load is required.

FUTURE SCOPE:

Sowing machine is a machine that helps with in sowing of seeds with in desired position therefore aiding farmers in time saving and cost. It can perform the operations additional with efficiency and additionally will end in low price.

- Work dependably beneath completely different operating conditions. Reduces the price of the machine. Reduce the labour price.

III. CONCLUSION

The output of this planting machine could be substantially increased. The key objective right now is to spread awareness of this technology and make it cheap for farmers. The planting apparatus can easily produced in workshops using materials found nearby. It is possible to accomplish flexibility of distance and depth variation for various plant plantations by employing this equipment

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