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FABRICATION OF SEEDING MACHINE FOR FARMER

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Abstract
Seed sowing machine should be suitable to all farms, all types of corps, robust construction, also is should be reliable, and this is basic requirement of sowing machine. Thus we made sowing machine which is operated manually but reduces the efforts of farmers thus increasing the efficiency of planting also reduces the problem encountered in manual planting. For this machine we can plant different types of seeds also we can vary the space between two seeds while planting. This also increased the planting efficiency and accuracy. We made it from raw materials thus it was so cheap and very usable for small scale farmers.
For effective handling of the machine by any farmer or by any untrained worker we have simplified its design. We will set 4 wheels in the trolley type structure where a motor is installed to keep seeding. In this seeding process motor can be operated on different speed to maintain different space between seeds according to the agricultural requirements.

Key Words:
Seed, Farmer, Fabrication

INTRODUCTION

Cropping is important and tedious activity for any farmer, and for large scale this activity is so lengthy also it needs more workers. Thus agriculture machines were developed to simplify the human efforts. In manual method of seed planting, we get results such as low seed placement, less spacing efficiencies and serious back ache for the farmer. This also limited the size of field that can be planted. Hence for achieving best performance from a seed planter, the above limits should be optimized. Thus we need to make proper design of the agriculture machine and also selection of the components is also required on the machine to suit the needs of crops. The agriculture is the backbone of India. And for sustainable growth of India development of agriculture plays vital role. The India has huge population and day by day it is growing thus demand of food is also increasing. In agriculture we saw various machines. Also there traditional methods are there. Since long ago in India traditional method is used. Also India has huge man power. This manual planting is popular in villages of India. But for large scale this method is very troublesome. The farmer has to spend his more time in planting. But time available is less for him. Thus it requires more man power to complete the task within stipulated time which is costlier. Also more wastage happens during manual planting. Hence there is need of developing such a machine which will help the farmer to reduce his efforts while planting. This process of using machines is called as mechanization. Along with mechanization automation also helps to increase the efficacy of the process.
The major occupation of the Indian rural people is agriculture and both men and women are equally involved in the process. Agriculture has been the backbone of the Indian economy and it will continue to remain so for a long time. It has to support almost 17%of world population from 2.3% of world geographical area and 4.2% of world water resources. The Seed Planter was an invention thought out in 1699 Proposed by the author. It was later built and used by author. He started off in law school and then later in his life studied agriculture. Jethro inherited land in Europe where he practiced his agricultural study. His seed planter successfully planted seeds in uniform although this was improved in 1782, Jethro Tull still takes credit for his extremely helpful invention. The present cropping intensity of 137% has registered an increase of only 26% since1950-51. The net sown area is 142 Mha. The basic objective of sowing operation is to put the seed and fertilizer in rows at desired depth and spacing, cover the seeds with soil and provide proper compaction over the seed. A traditional method of seed

sowing has many disadvantages. Different types of methods 2 International Journal of Pure and Applied Mathematics Special Issue 11750 of seed sowing and fertilizer placement in the soil and developing a multifunctional seed sowing machine which can perform simultaneous operations. In order to save the farmers effort and his valuable time, it is important to develop the method which not only saves the time but also saves his efforts. Farmers face the problem of nonavailability of bullocks as well as tractors during the peak period of sowing. Hence, they are tempted to hire them at an increased cost. By making use of automatic operated seed planter, the yield loss can be substantially decreased. The most important advantage of automatic operated seed planter is that - it can be easily driven by a single person as well as it can be driven manually. Currently maximum process is done manually which is too much time consuming and require more manpower for large farm areas and the automatic machines available they having too much cost. For reducing manpower, safety and most importantly cost in working automatic seed planter following practices are adopted Simplicity of process. Reduce human efforts. Eliminate steps. Improved accuracy. Researcher conducted A punch planter for corn was designed, prototyped, and evaluated for no-till conditions using a commercial seed metering unit. The seed meter was evaluated for seed spacing performance at the vertical position with 2.5 kPa of vacuum, as specified by the manufacturer, and at a 22 degrees incline with 4.0 kPa of vacuum. The prototype punch planter was evaluated at a 22 degrees incline with 4.0 kPa of vacuum. Only small changes occurred in the seed meter performance when speed varied from 1 to 3 m/s. The precision of seed spacing decreased approximately 6.0% when compared with the seed meter results. Author studied [5-10] High precision pneumatic planters have been developed for many varieties of crops, for a wide range of seed sizes, resulting to uniform seeds distribution along the travel path, in predefined spacing. The objective of the present work was to develop a high-resolution optical system for evaluation of performance parameters of pneumatic planters. This paper describes the design, construction and evaluation of the optical system.

Literature review

The major occupation of the Indian rural people is agriculture and both men and women are equally involved in the process. Agriculture has been the backbone of the Indian economy and it will continue to remain so for a long time. It has to support almost 17%of world population from 2.3% of world geographical area and 4.2% of world water resources. The Seed Planter was an invention thought out in 1699 Proposed by the author. It was later built and used by author. He started off in law school and then later in his life studied agriculture.

The paper gives the Cropping is important and tedious activity for any farmer, and for large scale this activity is so lengthy also it needs more workers. Thus agriculture machines were developed to simplify the human efforts. In manual method of seed planting, we get results such as low seed placement, less spacing efficiencies and serious back ache for the farmer. This also limited the size of field that can be planted. Hence for achieving best performance from a seed planter, the above limits should be optimized. Thus we need to make proper design of the agriculture machine and also selection of the components is also required on the machine to suit the needs of crops. The agriculture is the backbone of India. And for sustainable growth of India development of agriculture plays vital role. The India has huge population and day by day it is growing thus demand of food is also increasing. In agriculture we saw various machines. Also there traditional methods are there. Since long ago in India traditional method is used. Also India has huge man power. This manual planting is popular in villages of India. But for large scale this method is very troublesome. The farmer has to spend his more time in planting. But time available is less for him. Thus it requires more man power to complete the task within stipulated time which is costlier. Also more wastage happens during manual planting. Hence there is need of developing such a machine which will help the farmer to reduce his efforts while planting. This process of using machines is called as mechanization. Along with mechanization automation also helps to increase the efficacy of the process. The parabolic reflector or parabolic dish is constructed around two feed diameter to capture the sun’s energy. The focus of the parabolic reflector is pointed

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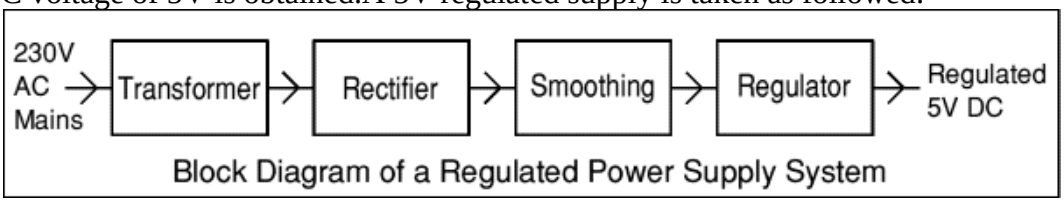
to a small area to get extremely high temperature. The temperature at the focus of the parabolic reflector is measured with temperature probes. This auto-tracking system is controlled with two 12V, 6W DC gear box motors.

Power supply

Power supply is the circuit from which we get a desired dc voltage to run the other circuits. The voltage we get from the main line is 230V AC but the other components of our circuit require 5V DC. Hence a step-down transformer is used to get 12V AC which is later converted to 12V DC using a rectifier. The output of rectifier still contains some ripples even though it is a DC signal due to which it is called as Pulsating DC. To remove the ripples and obtain smoothed DC power filter circuits are used. Here a capacitor is used. The 12V DC is rated down to 5V using a positive voltage regulator chip 7805. Thus a fixed DC voltage of 5V is obtained.A 5V regulated supply is taken as followed:



Block Diagram of a Regulated Power Supply System

POSITIVE VOLTAGE REGULATORS:

This includes 78xx voltage regulators. The most commonly used ones are 7805 and 7812. 7805 gives fixed 5V DC voltage if input voltage is in (7.5V-20). You may sometimes have questions like, what happens if input voltage is <7.5 V or some 3V, the answer is that regulation won't be proper. Suppose if input is 6V then output may be 5V or 4.8V, but there are some parameters for the voltage regulators like maximum output current capability, line regulation etc. won't be proper. Remember that electronics components should be used in the proper voltage and current ratings as specified in datasheet. You can work without following it, but you won't be able to get some parameters of the component.

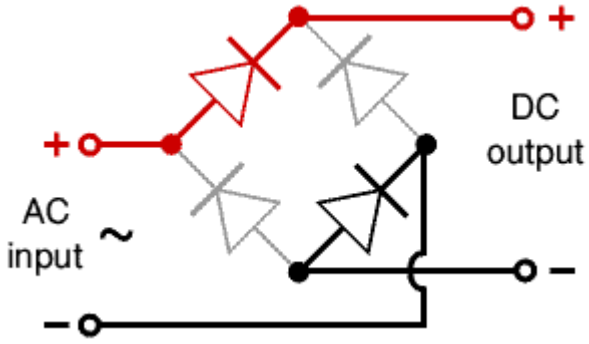


Fig.1: Full wave rectifier

Smoothing is performed by a large value electrolytic capacitor connected across the DC supply to act as a reservoir, supplying current to the output when the varying DC voltage from the rectifier is falling. The diagram shows the unsmoothed varying DC (dotted line) and the smoothed DC (solid line). The capacitor charges quickly near the peak of the varying DC, and then discharges as it supplies current to the output. Here a capacitor of 330uF is used as a smoothing circuit.

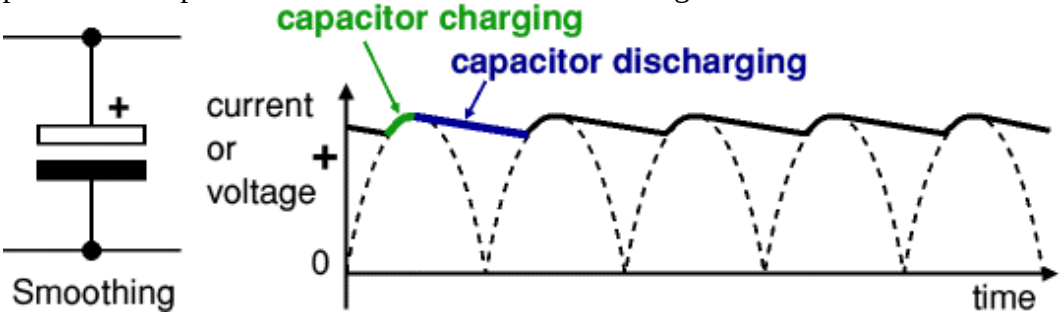


Fig: Smoothing perid of capacitor

Conclusion

This seed plantation machine has great potential for increasing the productivity of the planting. Till now tractor was the main traction unit for nourishment in farming. With the adaptation of this seed planting machine its purpose will be done. Hence there is need to promote this technology and made available to even small scale farmers with affordable prices. This machine can be made by raw materials also which saves the cost of whole project and is easily manufactured in available workshops. The only cost is of seeding motor and accessories

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