

**Visvesvaraya Technological University
“Jnana Sangama”, Belgaum**



A Project report on

“SMART FERTILIZER SPREADER”

(Sponsored by Karnataka State Council for Science and Technology)

Submitted in partial fulfilment of the requirement for the degree of

**BACHELOR OF ENGINEERING
IN
ELECTRONICS AND COMMUNICATION ENGINEERING
BY**

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2012-2013

ABSTRACT

A fertilizer or manure is materials that contain one or more of the essential elements and are applied to soils to encourage crop growth. The amount added is decided on after soil analysis. Fertilizer spreaders are used for this purpose. It is more important that fertilizers are applied properly and in accurate quantities to increase the crop yield. Whether we are planning to grow grass, vegetables or other types of plants, a spreader is a great investment that can help speed up the planting process. Smart Fertilizer spreading system increases crop yields and improves crop quality and keep your garden, yard and agriculture land healthy each season by using a fertilizer spreader to distribute fertilizer evenly.

The density and distance control pins monitored by the PIC controller are used to vary the quantity of the fertilizer and the distance at which the fertilizer has to be sprayed. The fertilizer from a hopper falls on the motor controlled spreading plate and is spread evenly. Fertilizer application is only effective if you ensure uniform coverage. Dry fertilizers can be applied with either a drop (gravity) spreader or rotary spreader.

In this project the distance control and density control is connected to the PIC controller which checks the value of distance control pin based on this value PIC control will control the speed of the spread plate motor to control the distance. Similarly it also checks the status of the density controller connected to the PIC controller to vary the amount of fertilizer or seeds that has to be distributed. The backup power supply is given to the PIC controller. Fertilizer in the hopper is connected to the dropping hole where it controls the flow of fertilizer through the hole by using valve controller.