

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

“Jnana Sangama” Belagavi – 590010



PROJECT REPORT ON

“AUTOMATED NURSERY TRAY FEEDER SYSTEM”

Submitted in partial fulfillment of the requirements for the award of degree

BACHELOR OF ENGINEERING IN ELECTRONICS & COMMUNICATION ENGINEERING

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

MOODBIDRI – 574 225.

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(Affiliated to VTU, BELAGAVI)

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CERTIFICATE

Certified that the project work entitled "AUTOMATED NURSERY TRAY FEEDER SYSTEM" is a bona fide work carried out by

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in partial fulfillment for the award of BACHELOR OF ENGINEERING in ELECTRONICS & COMMUNICATION ENGINEERING of the VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI during the year 2016-2017. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.



Signature of the Guide

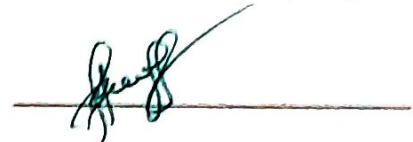
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ABSTRACT

India being an agricultural country from cons is facing many problems in the same due to non-availability of good quality seeds, lack of skilled labour, and improper rainfall. Also the growth in this regard is very slow and there is very less knowledge that the farmers know about proper growing methodologies of crops for different weather conditions. The major problem faced by the farmers or any other major companies involved in agricultural practices is wastage of good quality seeds. This leads to an increase in the overall cost of production. There are some mechanical machines and tools that have reduced the effort of farmers up to a certain extent such as introducing tractors which are modified to perform various agricultural practices like tilling, sowing, harvesting etc. There are also robotic systems that have been theorized and prototypes have been deployed, but in vain have not produced optimal results.

Nurseries have also started to invest in development of systems that are helpful increasing the quality crop growth, such as tray feeder system. This system is helpful in easy distribution of seeds into all the tray cups evenly which reduces wastage of seeds. This system is automated and can perform optimally, but this system has major drawbacks and costs very high, maintenance of this system is very expensive as the mechanical components used in it need to be replaced after a time period because the wear and tear that occurs on these parts. Also this system does not make use any sensors and sometimes the seeds may actually not fall into the tray cups, also due to lack of sensors this system keeps on running even in the absence of trays.

This proposed system overcomes these drawbacks and also makes use of sensors that are helpful in controlling the fall of seeds into the tray cups. The rotor that has been designed to deposit the seeds is also very effective and is comparatively less costly. The maintenance work that has to be done is only on the rotor, which is a part that can be easily replaced. The total cost of the new nursery tray feeder system has been reduced drastically.