VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi – 590 010

PROJECT REPORT ON

"Agricultural UAV for Spraying Pesticides on Field Crop and Arecanut Tree"

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

CERTIFICATE

Certified that the project work entitled "**AGRICULTURAL UAV FOR SPRAYING PESTICIDES ON FIELD CROP AND ARECANUT TREE**" *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.

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ABSTRACT

The quadcopter plays a major role in present world from military applications to the lightweight carrying camera. The quadcopter is also used in many modern agricultural fields to monitor the pest controller in a large crop area and to locate pour crop growth using camera. Control of pest places a vital role in agriculture for better yield and profit gain to the farmer. The spraying of pesticide at correct period is bit necessary for any field crop and arecanut tree, currently the problem faced by farmer is to spray pesticides to crop with more labor and their high wages. For an arecanut tree to spray pesticide were the branches are high above the ground, farmers face many difficulties.

The proposed system uses a quadcopter, which carries pesticide-spraying unit as a payload and sprays pesticides from the desired height, which is controlled by a ground station controller. The spraying unit is integrated with a NodeMCU to monitor the pesticide level in the container and thus prevent from dry run of the submersible pump which helps in precision spraying due to which wastage of pesticides can be reduced. The proposed system enables the farmers to spray pesticides to field crop and arecanut tree by their own module and thus controls the pest level in their crop from time to time.

The pesticides spraying aircraft is designed and implemented to carry a payload of nearly 500 milliliter pesticide container which can lift to a desired height of 10 meter from ground surface and spray it to the arecanut branches, it can also be used in pesticides spraying for field crop at a surface area of 10 meter in radius from the centre. Thus the model prevents the wastage of pesticides and also the man power is reduced to two labours.