

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

Jnana Sangama, Belgaum-590018



A Project Report

On

“CROP ROTATION CONTROL & BIRD PREDATION CONTROL BASED AUTOMATIC IRRIGATION SYSTEM”

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BACHELOR OF ENGINEERING

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By

KARTHIK KAMATH B. 4MT10EC052

KAMATH ASHWIN GANESH 4MT10EC050

NAGENDRA PRABHU 4MT10EC067

NARASIMHAMOORTHY 4MT10EC068

Under the Guidance of

Mr. GANESH V.N.

Sr. Asst. Professor

Dept. of Electronics and Communication Engineering



**Department of Electronics and Communication Engineering
MANGALORE INSTITUTE OF TECHNOLOGY & ENGINEERING**

(An ISO 9001:2008 Certified Institution)

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ABSTRACT

Water saving irrigation system is designed based on the microcontroller. With increasing freshwater demand, it is important to make optimal use of water resources with improved agricultural productivity through objective and accurate information provided by remote sensing. The soil moisture information is collected and data is transmitted to the microcontroller computer network. In this project we have described an application of a moisture sensor network for low-cost microcontroller based irrigation solution and real time monitoring of moisture content of soil for the purpose of control of valves for irrigation. Also this system provides provisions for controlling the irrigation system for various crops used throughout the season such as Paddy, Sugarcane, Wheat, Millet (Ragi) etc. based on water requirement for each crop which is operated on ***crop rotation*** technique. This system is very intelligent to handle three to five crops at a time. The system gets many inputs from the field and there are set of electric valve which are controlled by the system. And the water level in the field can be maintained by this set of arrangements. Along with these the system includes Ultrasonic Bird Scare Devices; a non-lethal tool can be used by farmers to minimize ***bird predation*** on crops. These devices emit an ultrasonic noise that frightens birds away from the crop. Specific Irrigation management that allows producers to maximize their productivity while saving water and prevents bird predation on crops. The system can also runs through commands from the GSM module.

Today the farming underwent many difficulties like depending on rain, the restless manual work and other efforts which can be overcome using this system.