CSE 499A & B

Senior Project

Agriculture Monitoring Rover

Samiul Azim – 1531403042

Md. Moniruzzaman -1511198042

Supervisor

DR. SHAZZAD HOSAIN

Name: Samiul Azim
Student ID: 1531403042

Signature: _____

Date: _____

Name: Md. Moniruzzaman

Student ID: 1511198042

Signature: _____

Date: _____

Supervised By

Dr. Shazzad Hosain, Professor
Department of Electrical and Computer Engineering
North South University

Signature: _____

Date: _____

Highly Encouraged and Approved By

Dr. Mohammad Rezaul Bari, Associate Professor & Chair
Department of Electrical and Computer Engineering
North South University

Signature: _____

Date: _____

Dedication

This is dedicate *To our beloved* ***Parents*** who are the source of our inspiration and give us strength when we are on the path of giving up, they continuously support and encouraged us to do something better in life.

To my sisters, brothers, relatives, mentor and friends who encouraged to finish this project.

Again, we want to dedicate this to Allah for giving us the strength, skill, mind and a healthy life during all these chaos and pandemic. All of these is only possible for him.

Acronyms

DHT	Humidity and Temperature Sensor
GDP	Gross Domestic Product
GPS	Global Positioning System
GSM	Global System for Mobile Communication
RH	Relative Humidity
SIM	Subscriber Identity
SMS	Short Message Service

Agriculture Monitoring Rover

Abstract

Bangladesh economy draws its main strength from the agriculture sector. The sector contributes 19.10% to GDP (at current prices) and employs 50.28% of the labour force.[1] However inadequate management practices (fertilizer, water, and pests & diseases) are one of the driving causes for agricultural productivity to be reduce din Bangladesh. The use of fertilizers, quality seeds, and irrigation together cannot ensure sustainable production unless timely and appropriate measures for the management of other nutrients are simultaneously pursued. Therefore this project proposes a completely innovative, user friendly technology that assists farmers in maintaining their crop nutrients without any effort.

The function of the rover will be to move around a field comprised of a fixed area. This will be established using a GPS tracker. The rover will it have a colour sensor, DHT sensor, water sensor, moisture sensor which will detect the colour change, and also other things which affect the crop's growth and wellbeing. The information collected by the rover will be sent to the farmers via a message over their personal mobile phones. Our project aims to give actual data or condition of the crops to the producers to take right steps for the yield production. Using these information, the farmer can take necessary steps for the well- being of the crops, further improving crop yield and productivity.

[1] Z. Karim. 1997. Accelerated Agricultural Growth in Bangladesh. Seminar on Agricultural Research on Development in Bangladesh. BARC.