Introduction

S1: Shivaansh Sharma

S2: Pravin Carthic

S3: Anwita Raman

S4: Aryaa Gawas.

All students one by one(s1 to s4) ….

Good morning respected judges, I am SS,PC, AR,AG and we represent MYP1 ,and are called "Smart Agronomers".

[S4] : We present our IOT based smart irrigation project to you.

[S2] Hi Shivaansh,can you tell me what is irrigation and why is it important in agriculture?

[S1] yeah sure Pravin…

Irrigation is the practice of applying controlled amounts of water to land to help grow crops. Having the right amount of water content in the soil is a crucial aspect to ensure healthy growth of the crops. Higher as well as lower than optimal moisture in the soil leads to poor growth of the crops with degraded quality. Extreme conditions can mean complete loss of crops too.Since rains are seasonal in most parts of the world irrigation has been essential for growing crops.

[S2]

What are the advantages of using our Smart irrigation system?

[S3]

In traditional forms of irrigation, the delivery of water to the soil is managed manually. This leads to a few problems.

First the amount of water that's delivered depends on the farmer's judgment and carefulness to control the optimal amount of water. This means, on one side this leads to suboptimal use of the available water. And for the other side, the crops themselves may either get over-irrigated or stay drier than required. Finding the right balance is tricky.

[S4]Secondly , this requires a sustained manual effort and therefore limits the area of land that can be irrigated based on the manpower available.

A recent study from American Geophysical Union [1], expects that by 2050 more than 80% of the agricultural land will face water scarcity. It is imperative then to use the optimal amount of water for irrigation.

[S2] Our smart irrigation system.is mainly used for the same.
It is IOT based, hence farmer gets the accurate reading of temperature, humidity and the moisture of the soil.
Depending upon the reading, the farmer can decide to water the farms till he gets a satisfactory reading.All this can be done sitting anywhere in the world.

This is the circuit
S3
this is moisture sensor ,the pins are connected to it to sense the moisture in the soil.

S4
this is the temperature and humidity sensor.
This is the Nodemcu board, the brain of the entire process.It has wifi chip ESP8266 embedded onto it.

S1
We have connected two battery in series circuit(3.7 volt each summing to 7.4volts.)
Here is the motor driver connected to the motor,here it is a water pump.

S2- we have integrated the system with the BLYNK IOt app available in appstore.After customizing as per our need, we can see the three values for humidity,temperature,moisture.(show judges)
There is On/OFF option that empowers the farmer to start the water pump for irrigation looking at the reading.(shows by pressing ON)

S3-
These controls can be operated from multiple device at the same time.So it is highly scalable and available.

[S1]This will help in growth of quality crop

This will.also help in saving water,as water consumption is maximum.for agriculture.

We can address 2 major SDG issues of poverty and water scarcity.

[S3] Exactly, we've always been thinking of a farmer as one who toils day and night but finds it difficult to feed his own family.

Let's break this stereotype and empower our farmer fraternity.

[S4]Let us make them smart and tech savvy and make their farming a pleasurable experience with good returns.

The need for food is never going to end, it's time we think of tomorrow and act now.

[S1]

This is just a start to make the farmers smart

We plan to add more automation

This is our award winning project in the young international expo BUD E, a load carrying companion bot.

We plan to integrate BUD E and come out with a comprehensive farming solution.

[S2]

1.Adding a plough for auto ploughing,

2.Adding robotic arm to pluck the crops.

3.Scaling BUDE to carry huge loads of crops(Farm to factory) etc.

4.Adding IOT sensors to detect tresspassers/intruders and save the farm.

[S3]Indian economy being heavily dependent on agriculture, it is high time, we act now for a livable tomorrow.

[S4] Respected JUDGES,hope you like our effort in making the farmers powerful and giving them a entrepreneurial status in the society…

ALL TOGETHER-

Jai Jawan, Jai Kisan