

Project Design Phase-I

Proposed Solution

Date	19 September 2022
Team ID	PNT2022TMID04692
Project Name	IoT Based Smart Crop Protection System for Agriculture
Maximum Marks	2 Marks

S.NO.	Parameter	Description
1	Problem statement (Problem to be solved)	<ul style="list-style-type: none">➤ Crops are not irrigated due to insufficient labours.➤ Improper maintenance of crops due to environmental factors like temperature, topography and soil quality which results in crop destruction.➤ Need to protect crop from wild animals , birds and pests.
2	Idea/Solution Description	<ul style="list-style-type: none">➤ Moisture sensor is interfaced with Arduino Microcontroller to measure the moisture level in soil and relay is used to turn ON & OFF the motor pump for managing the excess water level. It will be updated to authorities through IOT.➤ Temperature sensor to monitor the temperature in the field which is connected to the microcontroller.➤ Image processing techniques with IOT is followed for crop protection against animal attack.
3	Novelty/Uniqueness	Automatic crop maintenance and protection using embedded and IOT Technology.
4	Social Impact/Customer Satisfaction	This proposed system provides many facilities which helps the farmers to maintain the crop field without much loss.
5	Business Model (Revenue Model)	This prototype can be developed as product with minimum cost with high performance.
6	Scalability of the solution	This can be developed to a scalable product by using solution sensors and transmitting the data through Wireless Sensor Network and Analysing the data in cloud and operation is performed using robots.