

<https://www.youtube.com/watch?v=knoqp7WqIxs>

Automatic Harvested Crop Protection System

Nowadays, during the rainy seasons the cultivated crops gets affected due to the heavy rain fall. The main theme of this project is to prevent the crops from the heavy rain and also save the rain water.

The aim of the project is to design an automotive rain operated roof to protect the field crops from rain. The rain sensor is used for the working of automatic roof. This system involves protecting the crops by the auto roof which covers the whole area where the crop is spread. The rain sensor is activated when there is rainfall and it will give intimation to the controller. Controller closes the roof as soon as rain is detected along with buzzer; also send a SMS and call to the farmer by using GSM. Once rain stops the controller automatically opens the roof.

The main controlling part of the project is Arduino UNO microcontroller controller. Rain sensor, DC motors along with motor driver, GSM and buzzer are interfaced to the microcontroller. When the Rain falls on sensor it will detect and process this signal to the microcontroller then microcontroller close the roof on crops which is attached to the DC motor and activate the buzzer for alerts also sending the alert message to the predefine mobile number through GSM. To achieve this task controller loaded program written in Embedded C language.

Main features present in this project:

1. Rain operated automatic roof to protect the crops from rain.
2. Sensor-based automatic rain detection.
3. DC motor-based roof controlling system.
4. To achieve this task using Arduino UNO Microcontroller.

Major blocks present in this system:

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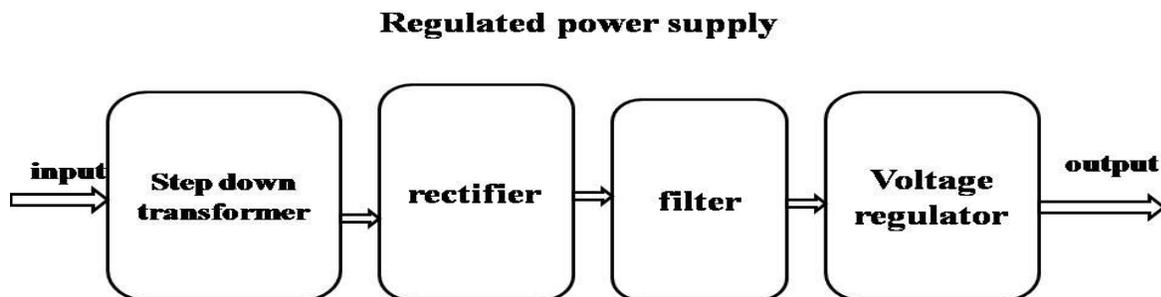
Ameerpet: #A-7, 2nd floor, Eureka court, Above KS bakers, Ameerpet, Hyderabad – 73.

- ✓ Power supply.
- ✓ Arduino UNO Microcontroller.
- ✓ Buzzer.
- ✓ GSM.
- ✓ Rain sensor.
- ✓ DC motor along with motor driver.

Software's used in this project:

1. Embedded C programming.
2. Arduino IDE studio programmer for dumping code into Micro controller.
3. Express SCH for Circuit design.

Regulated power supply:



Block Diagram:

Automatic rain protection system for crops with SMS and Auto-Dial

