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IOT Based Rain Roofing for Crop Protection & Water Management System using Solar System

Mr. Dahiphale P. D.[1], Miss. Bhosle Kalyani[2], Miss. Rakshe Nikita[3], Miss. Hodgar Rutuja[4], Miss. Phad Kajal[5], Miss. Mahale Dipali[6]

Professor, Department of Electronics & Telecommunication Engineering[1]
Students, Department of Electronics & Telecommunication Engineering[2,3,4,5,6]
Amrutvahini Polytechnic, Sangamner, India

Abstract: *Agriculture is a backbone of our country. About 70% of our country's revenue comes from agriculture. But during heavy rain falls, the farmers face lot of problems because there cultivated crops get washed off or destroyed. So in order to avoid this problem this project is designed which helps if protecting the crops from heavy rainfall and saving that rain water to use it for other purposes. The saved water can be used for feeding animals, washing, cooking etc. and can also be reused to sprinkle it back to the field when needed. In this system an automatic roof is inculcated which works by taking the signals from the rain and soil moisture sensors and covers the whole field to protect it from heavy rains. Whenever there is rainfall the rain sensor gets activated. The water level in the soil is sensed by the soil moisture sensor. Whenever there is rain, the rain sensor is „ON" and when the water level in the soil is beyond the normal level then soil moisture sensor is „ON". If both the sensors are "ON" then this information is send to the controller. then the controller indicates the DC motor to run which opens the roof automatically to close the field using a polythene sheet. If there is any problem in opening of the roof, then this is performed manually by the farmers.*

Keywords: Auto Roof, Rain Sensor, Temp Sensor, Moisture sensor Automation

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