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D-Crop Soil Moisture Monitoring and Controlling System for Crop Production

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Abstract: *D-crop Soil Moisture Monitoring and Controlling System for crop production, is a system that based on assisting famers to monitor the moisture (Temperature & Humidity) and uptake of water by the crops for the better growth and development of crops. The system will help to monitor the uptake of water by the crops throughout all seasons to make sure the crops do not run out of water for more crop production. With its capability, the system is able to find out whether or not the crops are running out of water in the soil. When the crops run out of water, the system will detect through soil moisture sensor and sends the notification to the software showing the percentage of water level that is currently in the soil. Etc. The software to control the system is developed in C# language specifically with xamarin cross platform for both desktop and mobile app. The system also engages the firebase and ThingSpeak API for real time Display of data. The system will help both small scale farmers and for those willing to invest much in Farming. Irrigate the correct amount of water at right time which can lead more crop yields, less diseases and serving water as well.*

Keywords: xamarin, Moisture Sensors, C#, Analogue port, IDE (integrated development Environment), soil moisture Content (SMC), statistics analysis, Soil moisture Sensors system

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