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A NEW TECHNIQUES FOR SOIL MOISTURE SENSOR

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ABSTRACT

Irrigation management strategies based on soil moisture monitoring give a significant benefit for the application of the proper amount of water in the fields. The design and development of a soil moisture sensor as well as a response monitoring device are presented in this paper. Soil moisture sensor detects the moisture present in the soil by figuring the variable water content (VWC) with the help of probes. The probes in this sensor are constructed of nickel, which is a corrosion-resistant and durable material ideal for agricultural applications. The soil moisture is measured by the response monitoring system, compared to the threshold values provided by the user, and an alert is generated if the soil moisture falls below the predefined value or rises above the predefined value. It aids in the solution of problems relating to the growing of crops that require irrigation at irregular intervals. It's also useful for keeping track of soil moisture in golf courses. There is a potential of more research and improvement in this field in future and it can be further improved by using Bluetooth to provide direct wireless distribution of output data to the farmer. The moisture retention capacity of the soil can be calculated using data from a computer database.

KEYWORDS: *Moisture, Probes, Sensor, Soil, VWC, Water.*

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