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## Automatic Plant Watering Control System Using Raspberry Pi and Internet of Things (IOT)

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**Abstract:**-The recent trends are focusing on low cost techniques to support cost inexpensive and resource managed agriculture in developing and under developing countries with large population. The main motivation for the development of low cost sensing systems is to provide low cost irrigation facilities along with conservation of water at a simultaneous instant. The current paper highlights the development of soil moisture sensor that can be placed on suitable locations on field for monitoring of moisture content of soil, the two parameters to which the crops are susceptible. The system operates on a basis of feedback control mechanism with a centralized control unit (i.e. Raspberry pi 3) which regulates the flow of water to the field in the real time based instantaneous moisture values of the sensor. Depending on the varied needs of different crops and field conditions, a lookup table has been prepared and the table further referred for supplying the amount of water needed by that crop. Water is also supplied depending upon the field condition and moisture level. The system based on a Raspberry Pi 3 has been applied on rice and maize fields by considering a single area (particular area) as reference.