SMART IRRIGATION

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SYNOPSIS

India is known as land of farmers. But in India, Technology has not been exploited properly for agricultural purposes. Thus we have taken up this project to make use of the technology in an efficient way by exploiting non-conventional sources of energy which is solar power in this project. This also solves different problems like availability of labor, and it also increases the productivity at the same time.

This project "smart irrigation" using microcontroller helps in irrigating the field without manual intervention. In this, there is a moisture sensor which senses the moisture content of the field and gives its output to a microcontroller. This microcontroller compares the input from the sensor with the predefined set-point required, preset through the program for the particular field, if the moisture content is below the minimum requirement of the field, then it operates the water pump until moisture reaches the set point. This process continues till the moisture content of the field comes to the required level, after attaining or exceeding the set point the motor will be switched off.

The power required for control & measurement operation is provided by a solar panel while central pump is powered conventionally. Here an intelligent solar panel is used which is capable of tracking the sun at its various positions to get maximum intensity of light during daytime.