Analysis of Automated Irrigation System by Use of Multiple Sensors

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Abstract: **In this paper. Irrigation is the artificial application of water to the soil usually for supporting in rising crops. In crop manufacture it is mostly used in waterless areas and in periods of rainfall shortfalls, but also to protect plants against hoarfrost. India faces many problems in agriculture system and one of the major problems is the optimum use of water and electricity.The irrigation system is use only when there is not sufficient moisture in the soil and the microcontroller decides when should the pump be turned on/off, saves a lot time and water for the farmers.**

Keywords: Requirement of water to plant, Micro controller; Temperature sensor; Humidity sensor, review

I. INTRODUCTION

The irrigation system is use only when there is not sufficient moisture in the soil and the microcontroller decides when should the pump be turned on/off, saves a lot time and water for the farmers. As there is no unanticipated usage of water, a lot of water is saved from creature wasted. This also gives much wanted rest to the farmers, as they don't have to go and revolve the pump on/off automatically. In a lot of countries like India where agriculture and the climatic conditions are isotropic, at a standstill we are not able to make full use of agricultural possessions. The main reasons is the not have of rains & insufficiency of land lake water. The continuous removal of water at normal intervals from earth is dropping the water level as a result of which the zones of un-irrigated land are frequently increasing. Also, the unexpected use of water accidentally results in wastage of water. Irrigation efficiency can be divided into two components water losses and uniformity of application. If either the water losses are large, or application uniformity is poor, efficiency will be low. Over-watering is probably the most significant cause of water loss in any irrigation system. No matter how well the system is designed, if more water is applied than can be beneficially used by the crop, efficiency will suffer and wastage of electricity.

1) Need of Study:-

Whenever water is applied with less than perfect uniformity, some parts of the crop will receive more water than others. If the irrigation system is operated so that the part of the crop receiving the most water has its requirement met, then the remainder of the crop will be over irrigated. Thus, a non-uniform irrigation unavoidably results in some degree of under- or over-watering. Technologies which are existing should give the water level and supply electricity, hence it should work partially. It does not detect the water requirement of plants need. Resulting analysis of these technologies shows that insufficiency.

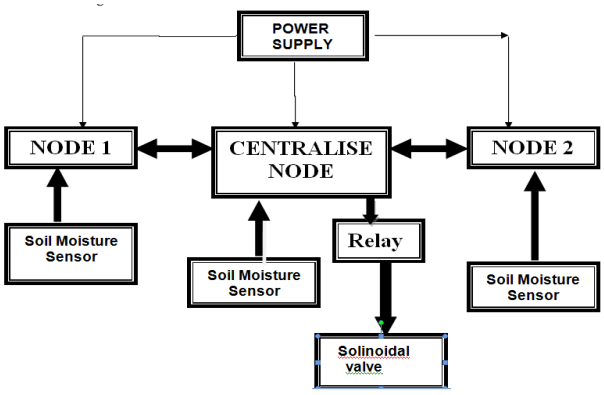
II. LITERATURE SURVAY

III. SOFTWARE AND HARDWARE PLATFORM USED

2.1 hardware **2.2 software used**

- Bar/post
- Solar panel
- Pic/microcontroller
- RF kit
- Relay
- Battery kit

PHP
MySql



CONCLUSION

The system provides with several benefits and can operate with less manpower. Due to the direct transfer of water to the roots water conservation takes place and also helps to maintain the moisture to soil ratio at the root zone constant to some extend.