**LITERATURE SURVEY**

IOT Smart Crop-field monitoring is a system describes how to monitor crop field. It is developed by using sensors and according to the decision from a server based on sensed data, the irrigation and monitoring system is enhanced. Through wireless transmission the sensed data is forwarded to web server database. If the irrigation is automated, then the moisture and temperature fields are decreased below the potential range. The user can monitor and control the system remotely with the help of application which provides a web interface to user. By smart Agriculture monitoring system and one of the oldest ways in agriculture is the manual method of checking the parameters. In this method farmers by themselves verify all the parameter and calculate the reading. The system focuses on developing devices and tool to manage, display and alert the users using the advantages of a wireless sensor network system. It aims at making agriculture smart using automation and IoT. The cloud computing devices are used at the end of the system that can create a whole computing system from sensors to tools that observe data from agriculture field. It proposes a novel methodology for smart farming by including a smart sensing system and smart irrigator system through wireless communication technology. This system is cheap at cost for installation. Here one can access and control the agriculture system in laptop, cell phone or a computer.

**EXISTING SOLUTION**

A system using sensors that monitor different conditions of environment like soil moisture, humidity, temperature etc., the processor and GUI module is used. The field condition is sent to the farmer via mobile text messages. With this system Soil moisture, humidity and energy efficiency are managed. A system is proposed for intelligent agriculture monitoring system based on IOT technology. The aim of the project is to protect fields from wild animals and to take account on soil moisture and temperature and humidity of the fields to reduce the farming expenses and to save energy. Overall, the design realizes remote intelligent monitoring and control of fields and replaces the traditional wired technology to wireless, also reduces manpower cost.

**SYSTEM ARCHITECTURE**

CLOUD SERVICE

IOT DEVICE

USER

GUI

**TECHNICAL PAPERS AND RESEARCH PUBLICATIONS**

1. Balaji Bhanu, Raghava Rao, J.V.N. Ramesh and Mohammed Ali hussain, “Agriculture Field Monitoring and Analysis using Wireless Sensor Networks for improving Crop Production”, Eleventh International Conference on Wireless and Optical Communications Networks (WOCN).2014.

2. HarshalMeharkure, Pargyline, Sheetal Israni, “Application of IOT Based System for Advance Agriculture in India”, International Journal of Innovative Research in Computer and Communication Engineering(IJIRCCE) Vol.

3. Issue 11, pp. 10831-10837, 2015. 3. LIU Dan, Cao Xin, Huang Chongwei, JI Liang Liang, “Intelligent agent greenhouse environment monitoring system based on IOT technology”, International Conference on Intelligent Transportation, Big Data &Smart City, 2015.

4. Mehdi Roopei,Paul Rad,Kim-Kwang Raymond Choo, “Cloud of Things in smart agriculture: Intelligent irrigation monitoring by Thermal Imaging” IEEE Cloud Computing,2017.

5. M.Srinivasaperumal,” ConcurrentNode Recovery From Failure In Wireless Sensor-Actor Networks” Advances in Natural and Applied Sciences, Vol.17, pp 240-246, December 2016.

6. P. Rajalakshmi and S.D. Mahalakshmi, “IOT Based Crop-Field Monitoring and Irrigation Automation”,10th Int’l Conf. Intelligent Systems and Control (ISCO) , pp. 1–5, 2016

7. R. Balamurali, K. Kathiravan, “An Analysis of Various Routing Protocols for Precision Agriculture using Wireless Sensor Network”,IEEE International Conference on Technological Innovations in ICT for Agriculture and Rural Development (TIAR 2015).

8. Rwan Mahmoud, TasneemYousuf, FadiAloul, “Internet of Things (IOT) Security: Current Status, Challenges and Prospective Measures'', Internet Technology and Secured Transactions (ICITST), 2015, 10th International Conference.

9. TanmayBaranwal”Development of IOT based Smart Security and Monitoring Devices for Agriculture”,Department of Computer Science Lovely Professional University Phagwara, Punjab, IEEE-2016.

10. V.Sandeep Department of Electronics, K. LalithGopal, S.Naveen,A.Amudhan, L. S. Kumar, “Globally Accessible Machine AutomationUsing Raspberry Pi Based on Internet of Things”, Advances inComputing, Communications and Informatics (ICACCI), 2015 International Conferences.