LITERATURE SURVEY

G. Naveen Balaji, V. Nandhini, S. Mithra, N. Priya , R. Naveena (2018) - IOT Based Smart Crop Monitoring in Farm Land

As new technologies has been introduced and utilized in modern world, there is a need to bring advancement in the field of agriculture also. Various Researches have been undergone to improve crop cultivation and have been widely used. In order to improve the crop productivity efficiently, it is necessary to monitor the environmental conditions in and around the field. The parameters that has to be properly monitored to enhance the yield are soil characteristics, weather conditions, moisture, temperature, etc. ,Internet of Things (IOT) is being used in several real time applications. The introduction of IOT along with the sensor network in agriculture refurbish the traditional way of farming. Online crop monitoring using IOT helps the farmers to stay connected to his field from anywhere and anytime. Various sensors are used to monitor and collect information about the field conditions. Collectively the about the farm condition is sent to the farmer through GSM technology.

Tambasafidy Francisco Pascal Elias, Ratongasoandrazana Jean Baptiste, Andrianiaina Hery, Rabesiranana Naivo, Rajaobelison Joel (2019) presents - Iot Based Environmental And Ionizing Radiation Monitoring System

Presence of air pollutant and uncontrolled release of radioactivity to the environment due to human activities, leads us to consider how important are the environmental parameters monitoring to ensure public safety. To remotely monitor, in real time, the air quality and the ionizing radiation level of the surrounding environment, an IoT-based (Internet of Things) system which is composed of a set of interconnected equipment which is able to monitor and collect data from the environment, was designed and implemented at the Madagascar Institute for Nuclear Sciences and Technologies (INSTN-Madagascar). The system consists of *i)* several sensing nodes based on esp8266 microcontroller equipped with sensors measuring environmental parameters i.e. air quality and ionizing radiation, *ii)* a central server for sensor data processing, event notification, real-

time analytics and data storage and finally *iii)* a nearly real-time web and android applications that operate from remote computers and mobile phones for remote access. The system was designed to be easily scaled-up to measure as well other parameters of interest. In this paper, the overall description of the system's architecture and software components is shown and workability proved.

Asadi Venkata Mutyalamma,Goplsetty Yoshitha,althi Dakshyani,Bachala Venkata Padmavathi (2020) presents - Smart Agriculture to Measure Humidity, Temperature, Moisture, Ph. and Nutrient Values of the Soil using IoT

Smart Agriculture now-a-days reducing various problems in farming. Farmers get required information and relative data to monitor the plants growth by the use of "INTERNET OF THINGS (IOT)", which connects the different sensors, actuators and other embedded devices. To provide quality crops based on soil nutrient level and its moisture content along with Ph. factor, also been maintained. Hence, in this project all those parameters are detected and controlled with the help of micro controller. Humidity sensor to detect the moisture content, where colour sensor is used to determine the percentage of soil nutrients (N_2, P4 &K). It will analyse soil nutrient content present in soil at real time and Ph. sensor is used to determine the Ph value of the soil. Monitoring of these it provides the proper fertility to the soil depending upon the soil nutrients. GSM is used to display the information to the farmers. Thus it reduces the growing of husk in terms of wastage and thereby getting good quality and healthy crops.

IOT Based Smart Crop Protection System for Agriculture

Internet of Things Smart technology enables new digital agriculture. Today technology has become a necessity to meet current challenges and several sectors are using the latest technologies to automate their tasks. Advanced agriculture, based on Internet of things technologies, is envisioned to enable producers and farmers to reduce waste and improve productivity by optimizing the usage of fertilizers to boost the efficiency of plants. It gives better control to the farmers for their livestock, growing cops, cutting costs, and resources.

Despite the perception people may have regarding the agricultural process, the reality is that today's agriculture industry is data – centered, precise, and smarter than ever. The

rapid emergence of the Internet of Things based technologies redesigned almost every industry including “smart agriculture” which moved the industry from statistical to quantitive approaches. Such revolutionary changes are shaking the existing agriculture methods and creating new opportunities along a range of challenges. Based on this thorough review, we identify current and future trends of IoT in agriculture and highlight potential research challenges.

Challenge in agriculture is to cultivate the crops in the farm and to deliver the crop to the end consumer with the best possible price. Monitoring the environmental cause play a vital role, A traditional approach is measuring these factor manually by an individual and these manual measurements are being checked each and every day. In this project we use IOT sensor and Cloud to monitor the soil fertility, temperature, humidity for betterment of the agricultural yield. The combination of IoT and cloud has promoted the development of agriculture and made them to realize smart agriculture and effective way to solve the issue concerning agriculture.