

## A Literature Study on IoT Based Monitoring System for Smart Agriculture

**Authors :** Sonu Rana, Jyoti Verma, A. K. Gautam

**Abstract :** In most developing countries like India, the majority of the population heavily relies on agriculture for their livelihood. The yield of agriculture is heavily dependent on uncertain weather conditions like a monsoon, soil fertility, availability of irrigation facilities and fertilizers as well as support from the government. The agricultural yield is quite less compared to the effort put in due to inefficient agricultural facilities and obsolete farming practices on the one hand and lack of knowledge on the other hand, and ultimately agricultural community does not prosper. It is therefore essential for the farmers to improve their harvest yield by the acquisition of related data such as soil condition, temperature, humidity, availability of irrigation facilities, availability of, manure, etc., and adopt smart farming techniques using modern agricultural equipment. Nowadays, using IOT technology in agriculture is the best solution to improve the yield with fewer efforts and economic costs. The primary focus of this work-related is IoT technology in the agriculture field. By using IoT all the parameters would be monitored by mounting sensors in an agriculture field held at different places, will collect real-time data, and could be transmitted by a transmitting device like an antenna. To improve the system, IoT will interact with other useful systems like Wireless Sensor Networks. IoT is exploring every aspect, so the radio frequency spectrum is getting crowded due to the increasing demand for wireless applications. Therefore, Federal Communications Commission is reallocating the spectrum for various wireless applications. An antenna is also an integral part of the newly designed IoT devices. The main aim is to propose a new antenna structure used for IoT agricultural applications and compatible with this new unlicensed frequency band. The main focus of this paper is to present work related to these technologies in the agriculture field. This also presented their challenges & benefits. It can help in understanding the job of data by using IoT and correspondence advancements in the horticulture division. This will help to motivate and educate the unskilled farmers to comprehend the best bits of knowledge given by the huge information investigation utilizing smart technology.

**Keywords :** smart agriculture, IoT, agriculture technology, data analytics, smart technology

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