

# Smart Agriculture Management System

Prof. Mane R. L.<sup>1</sup>, Pawar G. T.<sup>2</sup>, Ghadage V. V.<sup>3</sup>, Dhope S. G.<sup>4</sup>, Lande P. T.<sup>5</sup>

Guide, Department of E&TC Engineering<sup>1</sup>

Students, Department of E&TC Engineering<sup>2,3,4,5</sup>

Karmayogi Institute of Technology, Shelve, Pandharpur, India

rahulmane3636@gmail.com

**Abstract:** *Smart agriculture: farming system is new idea of farming in agriculture. It uses sensors to monitor environmental conditions, such as temperature, humidity, moisture and additional features like measurement of nitrogen, phosphorous, and potassium. It helps farmers to increase crop yields and reduce the costs. The system uses variety of sensors to monitor environmental as well as soil condition and sends the notification to farmer's smart phone when there are discrepancies. Soil moisture and NPK are two basic soil parameters to characterize soil. In India, about 52% population depends on agriculture. In these busy days, monitoring agriculture fields continuously is hectic task. In order to overcome this problem, IOT based smart agriculture management system is employed. Our device is aimed at providing the information about field. The farmers can monitor and control the various operations in field using our application. Farming and agriculture is basic of human life and technology holds an important role in increased product, decreased extra manpower that may play an important role in farmer's daily routine. By using various type of wireless sensors, multiple operations can be done, quality of soil is measured and decision can be taken up for optimum use of input resources like fertilizers and organic carbons. In smart agriculture management system NPK sensor is used for detecting percentage of sodium, Phosphorus and Potassium. Determination of soil moisture is done by using moisture sensor. Temperature sensor is used for measuring temperature of soil*

**Keywords:** Internet of Things, Soil Temperature, NPK, Soil Moisture