

## **ABSTRACT**

The cultivation of chili plants to increase production and quality has various methods to prevent a decrease in yield. Starting from the seed planting process, usage fertilizers, nutrition, and sterilization of the planting media. One of the efforts that farmers can do to obtain better production results is assuring the quality of the planting media used.

This study aims to create an internet of things-based implementation system to read real-time planting media quality and predict the right time for chili plant cultivation. This system can monitor soil NPK, soil moisture, soil pH, temperature, and air humidity to provide better production results. The data obtained will be stored and processed in real time in a data base for easy monitoring available through Android application and website.

With the existence of this system, chili farmers can monitor plant conditions more accurately and obtain the necessary information to optimize cultivation processes. The utilization of IoT technology in chili plant cultivation enables more precise decision-making and optimal planting timing. Consequently, it is expected that this system will provide better production outcomes for farmers and enhance the overall quality of chili plants.

**Keywords:** IoT, Chili plants, Android, Website