Abstract

Plant management systems include watering, fertilizing, and administering pesticides, where the system can determine output according to the input parameters that have been prepared. A system created in this research is a hardware-based system that is able to assist farmers in managing chili plants from the process of planting seeds to ready to harvest, so that it is more efficient in managing output, the tool uses a spray-type sprinkler. The system to be built is expected to provide accurate watering pump according to plant requirements, where input parameters are obtained from soil sensors, DHT sensors, and rain sensors. The system aims to make plants grow healthy and produce quality fruit.

The board used as a microcontroller is Wemos D1 R1, and NodeMCU. The board has integrated Esp8266 wifi module and is able to send data in realtime. In this study all censorship data was taken so that farmers could monitor the condition of the garden that had been planted with chili.

Keywords: *Smart farming, NodeMCU, Wemos D1 R1, Sprinkler, Soil Sensor, DHT Sensor, Rain Sensor.*