

ABSTRACT

Hydroponics is a type of agriculture that does not use soil as a growing medium, but only uses water that contains nutrients that plants need. For the success rate factor in planting using this method is strongly influenced by the way the owner takes care of the plants.

Several factors that greatly affect the quality of plants. In addition to water and nutrients needed by hydroponic plants, temperature and humidity are usually factors that play an important role in the development and increase the productivity of a plant, to support good hydroponic cultivation, a special place is usually provided which is usually called a greenhouse.

In this study, the design of a tool for monitoring hydroponic plants uses a GSM 800L module that is configured with the NodeMCU ESP-8266 module as a microcontroller as well as a wifi module for sending to thingspeak. The tools used consist of DHT 11 Sensor, NodeMCU ESP-8266 Microcontroller, and network. One way to monitor the status of the media to be observed is to create an electronic automation mechanism that can read the environmental conditions of the room.

Keywords: *Module GSM 800 L, Thingspeak, Hidroponik, Temperature and Humidity, Relay.*