ABSTRACT

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DESIGN OF AUTOMATIC WATERING EQUIPMENT FOR RED CHILI PLANTS USING NODEMCU ESP8266
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(xiii + 77 + Appendices)

Agriculture is a very important sector for the life of the Indonesian people. Farmers produce various kinds of food needs for the community. Like the cultivation of vegetables, namely chili. The optimal temperature for growing red chilies is between 24^{o}C - 30^{o}C with a soil moisture level of 40% -80%.

Current technological developments with the internet network allow humans to control devices remotely. For this reason, a plant watering system was created to assist farmers in providing water for plants. This tool uses three sensors, namely the dht11 sensor to detect indoor temperature, soil moisture to detect soil moisture, and ultrasonic to detect the height of water. For the microcontroller using Nodemcu esp8266. And for the output, namely mini water pumps, dc fans, and the Telegram application.

If the room temperature is detected above 30^{o}C then the fan turns on, and if the temperature is less than 28^{o}C then the fan turns off. If the soil moisture temperature is above 50% then the pump is off and the soil moisture can be said to be wet, and if the soil moisture condition is below 40% then the pump is on and the soil moisture can be said to be dry. And the ultrasonic sensor will detect whether the water level is filled or not if the condition of the water level can be said to be above 50 then the water is almost full and if the water condition in the container can be said to be less than 40 then the water is almost finished.

Bibliography (2006 - 2022)