ABSTRACT

Red Chili (Capsicum frutescens) is a plant that has many benefits. In addition, this plant also has a high selling price. Therefore many people choose to grow their own. But sometimes the results of planting less than the maximum. This can happen one of them because of the watering activities carried out. Watering plants takes more time and effort to do so. Often plant owners forget to water the plants which can cause the plants to die. Sometimes the amount of water that is sprinkled does not match the water needed by the plants. From these problems, the author will create an IoT-based automatic plant watering system using the SAW (Simple Additive Weighting) method. In this study, the authors used red chili (capsicum frutescens), Node MCUESP8266 as a microcontroller, soil moisture capacitive as a soil moisture sensor, and DHT11 as a temperature sensor. The results showed that the system can water the plants automatically with a capacitive soil moisture sensor reading accuracy of 96.63% and a DHT11 sensor reading of 98.98%. Besides that, based on the calculation of the SAW method, plants that are suitable for watering, namely the condition of plants that get a calculation result equal to or more than 36.

Keywords*: capsicum frutescens, DHT11, IoT, SAW method, soil moisture capacitive*