

ABSTRACT

*The tomato (*Solanum lycopersicum*, also known as *Lycopersicon esculentum*), a plantation product that can thrive in tropical and subtropical climates, is a member of the Solanaceae family. The issue with tomato production is that unstable climate change is causing tomato plant productivity to decline. How to use greenhouses for plant cultivation in order to overcome the issue of uncertain climate change. 20–27°C is a good range for air temperature for tomato plants. Tomato plants require a soil moisture content of between 60% and 80%. Temperature in the media is controlled with a lamp and fan so that the value is not more than 27°C. Then the monitoring system uses a website that displays the value of air temperature and water content in the planting medium and is stored in the database. The accuracy of this system is in the setpoint of soil temperature and humidity which can be changed according to the tomato plant parameters. The accuracy of soil moisture and temperature sensors is good, with the DHT11 sensor having a 99.71% accuracy rate and the YL-69 sensor having a 96.22% accuracy rate.*

Keywords: *Monitoring system, control system, Tomato, website, database, on-off.*