ABSTRACT

Light is one of the main sources needed by coral reefs for the growth process. The duration of lighting time on coral reefs is something that must be considered, because it can affect the growth of these biota. The IoT-Based Coral Reef Marine Aquarium Smart Lamp is designed to make it easy for coral reef enthusiasts and breeders to maintain in an aquarium to provide optimal lighting. Users can set the time when the lights will operate as desired and this system can also be controlled remotely using a smartphone. This study aims to see the effect of the growth of coral reef mushrooms (discosoma mushroom – gold) on the provision of lights with a duration of 10 hours and 24 hours. There are 2 stages of system testing carried out, namely manual system control testing and automatic system testing. The results of testing the manual light system can be controlled manually remotely through the blynk application with a time interval limit of pressing the switch above 2 seconds so as to get less delay time, while the results of the automatic system testing have 3 experimental scenarios, namely, without lighting, 10 lighting hours and 24 hours of lighting, it was found that 10 hours of lighting coral reefs can grow optimally and the growth of microalgae tends to be slower.

Keywords: *Light, Growth, Coral reefs, IoT, Blynk*