ABSTRACT

In the cultivation of black tilapia there are problems such as uncontrolled pH levels and turbidity of water. Therefore, a system was created that can monitor and control the pH and turbidity of the Black Tilapia fish pond using the circulation method. Monitoring is carried out using a pH sensor and a turbidity sensor. Meanwhile, to control the pH and turbidity, two control tubs were be made, spesifically the first control tub is decreasing the pH (\geq 7.5) and the second control tub is increasing the pH (<7.5). Both control tubs also function as turbidity filters so that the turbidity level is less than 50 NTU. The pH and turbidity values will be displayed momentarily on the LCD and also sent to the Thingspeak database via the GSM network. Based on the test results for three days, the pH values tends to decrease from 7.48 to 7.39. Meanwhile, the turbidity levels (NTU) slightly increased, spesifically was 9.95 NTU to 11.54 NTU. In addition, there is also a test of sending data to the Thingspeak database on the GSM network, which produces an average delivery time of 27.21 seconds with a packet loss of 3.07% of all data that should be sent.

Keywords: Monitoring, Circulation, pH and Turbidity.