

ABSTRACT

Catfish are known as fish with strong endurance and easy to breed. However, if raised in water with poor parameters and not maintained, a decrease in the quality and quantity of production can occur. Factors that affect the quality and quantity of production are the parameters of turbidity and dissolved oxygen in the water. The defined ideal turbidity parameter value for freshwater fish is 100 NTU and the dissolved oxygen ideal parameter is 3 mg/L. With the existing problems, an automation system was designed to monitor and control specific water quality on the parameters of turbidity and dissolved oxygen levels. This monitoring and control system of turbidity and dissolved oxygen is carried out in a pond with a diameter of 1 meter and a height of 1 meter. The test results obtained from the pool are an accuracy of ± 0.205 and 14.0084% error rate on the turbidity sensor, an accuracy of ± 0.1347 and 4.4889% error rate on the dissolved oxygen sensor and the reliability of the IoT network system used for wireless monitoring. In this system, the growth rate of catfish is 1.9610% and the survival rate is 90.625%.

Keywords: Turbidity, Dissolved Oxygen, Catfish, Monitoring, Control.