

ABSTRACT

Catfish (Clarias gariepinus) is one of the leading freshwater species developed in Central Java. One of the influential factors for the development of catfish is feed. The growth of catfish will be optimal if it is supported by the provision of feed that is adjusted to the nutritional needs of the fish and has a high digestibility value. Some of the obstacles that hinder the production process of catfish farming are feeding that is not in accordance with the conditions of the digestive level of catfish. Timing of feeding is the main key to increasing the yield of catfish farming. Based on a literature study, it was concluded that the darker the catfish farming environment, the better the digestion. This final project will examine an Internet of Things (IoT)-based automatic catfish feeder that utilizes LDR (Light Dependent Resistor) to determine the level of lighting in a catfish farming environment. This tool uses a light sensor which then sensor readings are sent to the NodeMCU ESP8266 microcontroller, the results from the light sensor will be processed by the microcontroller before being sent to the blynk platform. The results of light sensor and servo motor information will be sent to the Blynk Platform so that it can connect to the internet to be able to connect to the Blynk Platform using the NodeMCU ESP8266. The results of sensor readings will be visible on the Blynk Platform. In this test, the largest sensor reading value is 1016 at 19:00 WIB and the smallest sensor reading is 20 at 08:00 WIB. The greater the sensor value, the dimmer the light received and vice versa. This tool has set a threshold of 400 Lux where if the sensor value is below 400 Lux then the catfish feed will open and vice versa. Meanwhile, the highest average sensor reading is at 19:00 WIB and the lowest average sensor reading is at 08:00 WIB. This tool works according to the time of feeding catfish in general, which is between 08:00 - 16:00 WIB because it is below the threshold value.

Keywords: *Catfish, Internet Of Things, Light Sensor, NodeMCU ESP8266, Servo Motor, Blynk*