

## ABSTRAK

Dalam budidaya ikan lele, pembudidaya harus memberikan pakan ikan lele secara teratur. Pemberian ikan lele dewasa, frekuensinya adalah 4-6 kali dalam sehari. Karena banyak pembudidaya dari kelompok tersebut memiliki waktu yang terbatas. Akibatnya, proses pemberian pakan ikan lele cenderung tidak teratur dan terkadang takaran pemberian pakan ikan lele yang terganggu pertumbuhannya dan mati. Berdasarkan masalah yang dialami pembudidaya munculah solusi dengan menerapkan teknologi pakan otomatis. Teknologi ini memberikan pakan ikan secara otomatis berdasarkan waktu dan berat pakan yang telah ditentukan, secara *real-time* menggunakan Waktu Indonesia Barat. Hasil pengujian pada sistem pakan otomatis menggunakan metode *Close loop control system* didapatkan pada percobaan pertama ikan lele bertambah biomassa yang awalnya sebesar **4.070 gram** dan didapatkan bobot rata-rata ikan lele 50,9 gram hingga usia ke sepuluh sebesar **7.410 gram** dengan bobot rata-rata ikan lele 92 gram. Setelah itu, dilakukan penyortiran kembali dengan 50 ikan lele yang dijadikan sebagai sampel penelitian kedua. Berdasarkan hasil perhitungan biomassa ikan lele, biomassa hari ke sebelas sebesar **4.665 gram** dan didapatkan bobot rata-rata ikan lele 90,3 gram. Biomassa ikan pada hari ke duapuluh mendapatkan berat sebesar **5.900 gram** dengan bobot rata-rata 128 gram dengan kematian 4 ikan lele. Kondisi air yang ideal untuk ikan lele yaitu kadar pH diantara 6-8, dan suhu 26-29°C.

**Kata Kunci:** pakan otomatis, ikan lele, pakan ikan, pH, suhu air.

## **ABSTRACT**

*Catfish farming, cultivators must provide catfish feed regularly. Giving adult catfish, the frequency is 4-6 times a day. Because many cultivators from the group had limited time. As a result, the process of feeding catfish tends to be irregular and sometimes the dosage of feeding catfish is disturbed by its growth and dies. Based on the problems experienced by cultivators, a solution emerged by applying automatic feed technology. This technology provides fish feed automatically based on the time and weight of the feed that has been determined, in real-time using West Indonesian Time. The test results on the automatic feed system using the Close loop control system method were obtained in the first experiment, catfish increased its initial biomass of 4,070 grams and obtained an average weight of catfish of 50.9 grams until the tenth age of 7,410 grams with an average weight catfish 92 grams. After that, 50 catfish were re-sorted as samples for the second study. Based on the results of catfish biomass calculations, the eleventh day biomass was 4,665 grams and the average weight of catfish was 90.3 grams. Fish biomass on the twentieth day gained a weight of 5,900 grams with an average weight of 128 grams with the death of 4 catfish. The ideal water conditions for catfish are pH levels between 6-8, and temperatures of 26-29°C.*

**Keywords:** *automatic feed, catfish, fish feed, pH, water temperature.*