INTISARI

Sintasan, Pertumbuhan, dan Kualitas Air Budidaya
Lele Mutiara (*Clarias* sp.) dengan Padat Tebar Berbeda
pada Sistem Minim Ganti Air

Penelitian telah dilakukan untuk mengetahui sintasan, pertumbuhan, dan kualitas air pada budidaya lele mutiara (*Clarias* sp.), serta mengetahui padat tebar yang paling optimal bagi budidaya lele mutiara. Penelitian ini dilakukan pada bulan November 2023 s/d Maret 2024 di Departemen Perikanan, Fakultas Pertanian, Universitas Gadjah Mada. Penelitian ini terdiri dari 4 perlakuan, 150, 200, 250, dan 300 ekor/m^3 dan 3 kali ulangan. Benih yang digunakan berukuran 5 - 7 cm, dari Unit Kerja Budidaya Air Tawar (UKBAT) Wonocatur, Sleman. Lele dipelihara dalam ember bervolume 60 liter air selama 90 hari. Selama penelitian dilakukan sifon pada hari ke 10, 20, 30, dan 60 sebanyak 5 % volume air perember. Dosis pakan 3 % dari total biomassa lele. Parameter pertumbuhan budidaya lele dianalisis menggunakan ANOVA (*Analysis of Variance*) dan uji Duncan. Data hasil analisis yang berbeda nyata dilakukan uji polinomial ortogonal dan analisis *trend comparison*. Parameter kualitas air dianalisis secara deskriptif. Hasil penelitian menunjukkan bahwa perlakuan 150 ekor/m^3 memberikan hasil tertinggi pada sintasan 96,3 %, berat mutlak 97,2 g/ekor, laju pertumbuhan berat spesifik 2,8567 %/hari, panjang mutlak 14,6 cm, dan laju pertumbuhan panjang spesifik 1,0133 %/hari, serta hasil terendah pada nisbah konversi pakan 1,05. Total produksi tertinggi 1,23 kg/ember (volume air 60L) dengan *size* 12 - 13 ekor/kg diperoleh pada perlakuan 300 ekor/m^3 dan *size* 9 - 10 ekor/kg diperoleh pada perlakuan 150 ekor/m^3. Kualitas air pada perlakuan 150-300 ekor/m^3 menunjukkan kisaran suhu 27,2 - 31,9 derajat Celsius; pH 5,8 - 8,8; O_2 terlarut 0,6 - 7,9 mg/L; CO_2 bebas 3,0 - 66,0 mg/L; dan NH_3 0,498 - 4,622 mg/L.

Kata kunci : kualitas air, lele mutiara, padat tebar, pertumbuhan, sintasan

ABSTRACT

Survival Rate, Growth, and Water Quality of
Mutiara Catfish (*Clarias* sp.) Cultivation with Different Stocking Densities
on a Minimum Water Change System

Research had been carried out to determine the survival rate, growth, and water quality in mutiara catfish (*Clarias* sp.) cultivation, as well as to determine the optimal stocking density for mutiara catfish cultivation. This research was conducted from November 2023 to March 2024 at the Department of Fisheries, Faculty of Agriculture, Universitas Gadjah Mada. This research consisted of 4 treatments, 150, 200, 250, and 300 ind/m^3 and 3 repetitions. The seeds used were 5 - 7 cm in size, from the Unit Kerja Budidaya Air Tawar (UKBAT) Wonocatur, Sleman. Catfish were kept in a bucket with a volume of 60 liters of water for 90 days. During the research, siphoning was carried out on days 10, 20, 30, and 60 as much as 5 % of the volume of water per bucket. Feed dosage was 3 % of the total catfish biomass. Growth parameters of catfish cultivation were analyzed using ANOVA (Analysis of Variance) and Duncan's test. Data from analysis results that were significantly different were carried out by an orthogonal polynomial test and trend comparison analyzed. Water quality parameters were analyzed descriptively. The results showed that the 150 ind/m^3 treatment gave the highest results at a survival rate 96,3 %, an absolute weight of 97.2 g/head, a specific weight growth rate of 2.8567 %/day, an absolute length of 14.6 cm, and a specific length growth rate of 1.0133 %/day, and the lowest yield at a feed conversion ratio of 1.05. The highest total production was 1.23 kg/bucket (water volume 60L) with a size of 12 - 13 ind/kg obtained in the 300 ind/m^3 treatment and a size of 9 - 10 ind/kg obtained in the 150 ind/m^3 treatment. Water quality in the 150 - 300 ind/m^3 treatment showed a temperature range of 27.2 - 31.9 degrees Celsius; pH 5.8 - 8.8; dissolved O_2 0.6 - 7.9 mg/L; free CO_2 3.0 - 66.0 mg/L; and NH_3 0.498 - 4.622 mg/L.

Keywords: growth, mutiara catfish, stocking density, suvival rate, water quality