

Performa Pertumbuhan Udang Galah (*Macrobrachium rosenbergii* de Man, 1879)
SIJAWA dengan Sistem Budidaya Monoseks dan Campuran

Penelitian ini bertujuan untuk mengetahui pengaruh sistem pemeliharaan monoseks dan campuran terhadap pertumbuhan, *survival rate*, biomassa akhir dan *Feed Conversion Rasio* (FCR) udang galah strain SIJAWA pada tahap pembesaran. Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) dengan 3 perlakuan dan 3 ulangan yaitu (P1) Sistem pemeliharaan monoseks jantan, (P2) sistem pemeliharaan monoseks betina, dan (P3) Sistem pemeliharaan campuran (50% jantan dan 50% betina). Penelitian ini dilakukan di UK-BAP Samas. Penelitian dimulai dari persiapan kolam, grading kelamin antara jantan dan betina, kemudian sampling berat awal. Pemeliharaan dimulai dari ukuran berat $1,11 \pm 0,06$ gram dan panjang $4,27 \pm 0,11$ cm. Padat tebar yang digunakan pada masing-masing unit ulangan 10 ekor/m² dan dipelihara selama 70 hari. Parameter yang diamati biomassa akhir, rerata berat individu, rerata panjang individu, pertumbuhan berat mutlak, pertumbuhan panjang mutlak, *Average Daily Growth* (ADG), *survival rate*, dan *Feed Conversion Rasio* (FCR). Selama pemeliharaan dilakukan sampling berat dan panjang setiap 2 minggu sekali. Selain itu juga dilakukan pengecekan kualitas air parameter suhu, pH, DO, CO₂, alkalinitas, dan ammonia. Data sampling pertumbuhan, *survival rate*, dan FCR dianalisis menggunakan Analysis of Varians melalui aplikasi IBM SPSS. Hasil menunjukkan pada perlakuan monoseks jantan menunjukkan biomassa akhir 161.24 ± 11.073 gram, rerata berat individu $9,20 \pm 0,48$ gram, pertumbuhan berat mutlak $8,05 \pm 0,50$ gram, pertumbuhan panjang mutlak 4.58 ± 0.20 cm, dan ADG $0,111 \pm 0,003$ gram/hari, yang signifikan lebih tinggi dibandingkan dengan monoseks betina dan campuran. *Survival rate* tidak menunjukkan hasil yang berbeda nyata pada monoseks jantan 88.33 ± 7.64 %, monoseks betina 95 ± 5 %, dan campuran 91.67 ± 5.77 %. FCR tidak menunjukkan hasil yang berbeda nyata pada monoseks jantan 1.60 ± 0.14 , monoseks betina 1.95 ± 0.46 , dan campuran 1.98 ± 0.17 . Berdasarkan performa pertumbuhan tersebut sistem budidaya yang paling unggul adalah monoseks jantan. Hasil penelitian ini dapat menjadi acuan untuk meningkatkan produktivitas budidaya udang galah

Kata kunci: Campuran, *Macrobrachium rosenbergii*, monoseks betina, monoseks jantan

ABSTRACT

The Growth Performance of SIJAWA Giant Freshwater (*Macrobrachium rosenbergii* de Man, 1879) under Monosex and Mixed Culture Systems

This study aims to determine the effect of monosex and mixed maintenance systems on the growth, survival, final biomass and Feed Conversion Ratio (FCR) of giant freshwater prawns strain SIJAWA at the grow-out stage. This study used a Completely Randomized Design (CRD) with 3 treatments and 3 replications, namely (P1) Male monosex maintenance system, (P2) Female monosex maintenance system, and (P3) Mixed maintenance system (50% male and 50% female). This study was conducted at UK-BAP Samas. The study began with pond preparation, assessment of sex between males and females, then initial weight sampling. Maintenance started from a weight of 1.11 ± 0.06 grams and a length of 4.27 ± 0.11 cm. The stocking density used in each replication unit was 10 individuals/m² and maintained for 70 days. The parameters observed were final biomass, average individual weight, average individual length, absolute weight growth, absolute length growth, Average Daily Growth Rate (ADG), survival rate, and Feed Conversion Ratio (FCR). During maintenance, weight and length sampling were carried out every 2 weeks. In addition, air quality parameters such as temperature, pH, DO, CO₂, alkalinity, and ammonia were also checked. Sampling of growth data, survival rate, and FCR were analyzed using Analysis of Variance through the IBM SPSS application. The results showed that the male monosex treatment showed a final biomass of $161.24 \pm 11,073$ grams, an average individual weight of 9.20 ± 0.48 grams, absolute weight growth of 8.05 ± 0.50 grams, absolute length growth of 4.58 ± 0.20 cm, and ADG of 0.111 ± 0.003 grams/day, which was significantly higher than the female monosex and mixed treatments. The survival rate did not show any significant differences in male monosex ($88.33 \pm 7.64\%$), female monosex ($95 \pm 5\%$), and mixed ($91.67 \pm 5.77\%$). The FCR did not show any significant differences in male monosex (1.60 ± 0.14), female monosex (1.95 ± 0.46), and mixed (1.98 ± 0.17). Based on these growth performance, the most superior cultivation system is male monosex. The results of this study can be used as a reference to increase the productivity of giant freshwater prawn cultivation

Keywords: *Macrobrachium rosenbergii*, mixed, monosex female, monosex male