Intisari

Penelitian ini bertujuan untuk mengetahui pengaruh *Microbubble Generator* (MBG) terhadap kualitas air dan pertumbuhan lele dumbo (*Clarias* sp.) pada budidaya intensif. Penelitian ini menggunakan Rancangan Acak Kelompok Lengkap (RAKL) terdiri atas 3 perlakuan aerasi yang berbeda yaitu *Microbubble Generator*; aerasi konvensional; dan tanpa aerasi dengan 3 blok (kedalaman berbeda). Terdapat 9 kombinasi perlakuan yaitu MBG (kedalaman 1 m; 1,75 m; dan 2,5 m), aerator konvensional (kedalaman 1 m; 1,75 m; dan 2,5 m), dan tanpa aerasi (kedalaman 1 m; 1,75 m; dan 2,5 m). Lele dumbo ditebar dengan berat rata-rata 3,82 g dan pemberian pakan dilakukan dua kali sehari secara *adlibitum*. Hasil penelitian menunjukkan kualitas air perlakuan MBG menghasilkan rata-rata oksigen terlarut 2,63 mg/L; Suhu air 27^{o}C; CO_2 bebas 123 mg/L; alkalinitas 232,59 mg/L; dan amonia bebas (NH_3) 0,657 mg/L. Perlakuan MBG menghasilkan pertumbuhan panjang mutlak 18,55 cm/ekor; panjang spesifik 1,32%/hari; dan panjang relatif 0,21 cm/hari. Pertumbuhan berat menghasilkan berat mutlak 115,23 g/ekor; berat spesifik 4,02%/hari; dan berat relatif 1,37 g/hari. Hasil uji statistik menunjukkan perlakuan MBG berpengaruh positif terhadap oksigen terlarut, ammonia bebas, berat mutlak, berat relatif, dan berat spesifik. Hasil penelitian menunjukkan perlakuan MBG dapat meningkatkan kualitas air dan pertumbuhan mutlak, relatif dan spesifik lele dumbo

Kata kunci: Aerasi, kualitas air, lele dumbo, *Microbubble Generator*, pertumbuhan

Abstract

This study aims to determine the effect of Microbubble Generator (MBG) on water quality and growth of catfish (*Clarias* sp.) in intensive culture. The research used Randomized Completely Block Design (RCBD) which consists of three different aeration treatments such as Microbubble Generator, conventional aeration, and without aeration in three blocks (different depths). There are nine treatment combinations: MBG (depth, 1m; 1,75 m; and 2,5 m), conventional aerator (depth, 1 m; 1,75 m; and 2,5 m), and without aeration (depth 1 m; 1.75 m and 2.5 m). Catfish was stocked with an average weight of 3.82 g and fed twice daily in *adlibitum* manner. The results showed that the water quality of MBG treatment yielded an average of dissolved oxygen of 2,63 mg/L; Water temperature of 27 ^{o}C; free CO_2 of 123 mg/L; alkalinity of 232,59 mg/L; and free ammonia (NH_3) of 0,657 mg/L. MBG treatment obtained an absolute length growth of 18.55 cm/individual; specific length of 1,32 %/day; and relative length of 0,21 cm/day. The MBG treatment also obtained catfish growths with an absolute weight of 115,23 g/individual; specific weight of 4,02 %/day; and relative weight of 1,37 g/day. Statistical results showed that MBG treatment had a positive effect on dissolved oxygen, free ammonia, absolute weight, relative weight, and specific weight. Based on the results, it is concluded that MBG treatment can improve water quality and growth of catfish.

Keywords: Aeration, catfish, Growth, Microbubble Generator, water quality