Intisari

Penelitian ini bertujuan untuk mengetahui pengaruh berat tebar dan pakan berprobiotik terhadap kualitas air media pemeliharaan nila merah (*Oreochromis* sp.) nilasa. Penelitian ini dilakukan dengan melakukan pengamatan kualitas air secara fisik, kimia dan biologi pada kolam percobaan yang disusun 3x2 faktorial dalam Rancangan Acak Kelompok Lengkap (RAKL) dengan 2 ulangan. Faktor pertama adalah berat tebar dengan 3 level yaitu 2 kg/m^3, 3 kg/m^3, dan 4 kg/m^3 dan faktor kedua adalah pakan dengan 2 level, yaitu pakan berprobiotik (AP) dan pakan nonprobiotik (NP). Pengamatan dilakukan setiap satu bulan sekali pagi dan siang hari meliputi suhu air, DO, dan pH pada titik *inlet* dan *outlet* secara langsung menggunakan WQC; dan CO_2 bebas, alkalinitas, amonia (NH_3), zat organik, N total, dan fosfat (PO_4^-) dianalisis di laboratorium; dan sampel plankton diambil pada siang hari dan dihitung di laboratorium. Hasil penelitian dianalisis menggunakan ANOVA, apabila berbeda nyata diuji lanjut menggunakan uji Duncan. Hasil penelitian menunjukkan tidak ada pengaruh padat tebar yang nyata ($P>0,05$) terhadap seluruh parameter yang diamati. Jenis pakan berpengaruh nyata ($P<0,05$) terhadap karbondioksida bebas, alkalinitas, zat organik, dan plankton, namun tidak berpengaruh nyata ($P>0,05$) terhadap kecerahan air, suhu air, oksigen terlarut, amonia, pH, N total, dan fosfat. Hasil analisis ANOVA menunjukkan tidak adanya interaksi antara faktor perlakuan berat tebar dan jenis pakan terhadap kualitas air.

Kata kunci : probiotik, berat tebar, kualitas air, nila merah nilasa, *microbubble generator*

Abstract

The aim of this study was to determine the effect of stocking weight and probiotic dietary on the water qualities of red tilapia (*Oreochromis* sp.) of nilasa strain cultivation. Water quality was observed physics, chemical and biology in the experimental pond which was arranged in 3x2 factorial in Complete Randomized Block Design (RCBD) with 2 replications. The first factor was the stocking weight with 3 levels; 2 kg/m^3, 3 kg/m^3, and 4 kg/m^3 and the second factor was feed with 2 levels; the probiotic dietary and nonprobiotic dietary. Observations were carried out once every month in the morning and afternoon, including water temperature, DO, and pH at the inlet and outlet points directly using water quality checker; and free CO_2, alkalinity, NH_3, organic matter, total N and phosphate analyzed in the laboratory; and plankton samples taken during the day and counted in the laboratory. The results were analyzed using ANOVA and if there were significant different were further tested using the Duncan test. The results showed no significant effect of stocking density (P>0,05) on all parameters. The probiotic dietary significantly effect (P<0,05) on free carbon dioxide, alkalinity, organic matter, and plankton, but did not significantly effect (P>0.05) on water brightness, water temperature, dissolved oxygen, NH_3, pH, N total and phosphate. The results of the ANOVA analysis showed no interaction between the treatment factors of stocking weight and probiotic dietary on water qualities.

Keywords: probiotics, stocking weight, water quality, nilasa red tilapia, microbubble generator