



Intisari

Penelitian ini bertujuan untuk mengetahui kualitas air dan pertumbuhan gurami (*Osphronemus goramy* Lac., 1802), lele (*Clarias* sp.), dan nila merah (*Oreochromis* sp.) di kolam dengan pergantian air terbatas. Penelitian dilakukan di Sleman, Yogyakarta dengan metode Rancangan Acak Lengkap (RAL) yang terdiri dari dua ulangan. Percobaan menggunakan enam kolam permanen yang berukuran 2 x 2 x 1 m dengan ketinggian air 60 cm. Gurami ($65,33 \pm 10,80$ g/individu) dan nila merah ($42,77 \pm 10,60$ g/individu) menggunakan padat tebar 25 ekor/m², sedangkan lele adalah ($15,73 \pm 5,45$ g/individu) menggunakan padat tebar 100 ekor/m². Pakan komersial diberikan tiga kali sehari secara *ad libitum*. Sampling kualitas air dan pertumbuhan ikan diamati setiap dua minggu sekali selama 58 hari. Penyiponan limbah dilakukan setiap 14 hari sekali sebesar 10% dari volume air, sementara itu curah hujan selama penelitian dicatat. Hasil penelitian menunjukkan bahwa kualitas air dan pertumbuhan ikan selama pemeliharaan dengan pergantian air terbatas lebih sesuai digunakan untuk pemeliharaan lele daripada gurami dan nila merah.

Kata kunci: kualitas air, gurami, lele, nila merah, pertumbuhan.

Abstract

This study aims to know suitability of water quality and the growth of goramy (*Osphronemus goramy* Lac., 1802), catfish (*Clarias* sp.), red tilapia (*Oreochromis* sp.) in the ponds with limited water exchange system. The study was conducted in Sleman, Yogyakarta with method completely randomized design (CRD) with two replications. The experiment used six permanent ponds measuring 2 x 2 x 1 m with water depth of 60 cm. Goramy ($65,33 \pm 10,80$ g/individual) and red tilapia ($42,77 \pm 10,60$ g/individual) was stock at density of 25 fish/m² while cat fish ($15,73 \pm 5,45$ g/individual) was stock at density of 100 fish/ m². Commercial feed were given to the fish three times a day in *ad libitum*. Siphon was of waste were down by 10% of water volume, meanwhile the water rainfall during the experiment were recorded. The results showed that the parameters of water quality and fish growth during culture with limited water exchange were more suitable for the culture of cat fish than goramy and red tilapia

Keywords: water quality, goramy, catfish, red tilapia, growth.