Intisari

SINTASAN DAN PERTUMBUHAN NILA MERAH (*Oreochromis* sp.) MENGGUNAKAN AIR BUANGAN BUDIDAYA UDANG VANAME

Penelitian ini bertujuan mengetahui sintasan dan pertumbuhan serta kualitas air pemeliharaan nila merah (*Oreochromis* sp.) menggunakan air buangan budidaya udang vaname (*Litopenaeus vannamei*). Metode yang digunakan adalah percobaan dengan rancangan acak lengkap (RAL) terdiri atas 3 perlakuan padat tebar yang berbeda, yaitu 20 ekor/m3, 30 ekor/m3 dan 40 ekor/m3 dengan masing-masing ulangan 2 kali. Nila merah ditebar dengan ukuran 5-7 cm dan berat rata-rata 1,96 g. Air buangan budidaya udang di distribusikan sebanyak 10 liter setiap 2 hari sekali ke dalam bak pemeliharaan nila merah selama 75 hari. Pengamatan panjang dan berat individu ikan serta kualitas air dilakukan setiap 14 hari sekali. Hasil penelitian menunjukkan padat tebar 20 ekor/m3 memberikan sintasan terbaik ($P<0,05$) sebesar 90,59 % dibanding perlakuan yang lain. Pertumbuhan panjangnya: panjang mutlak 3,91 cm, panjang spesifik 0,77 %/hari dan panjang harian 0,05 cm/hari. Sementara pertumbuhan berat mutlak, berat spesifik dan berat harian masing-masing sebesar 8,53 g, 2,41 %/hari 0,11 g/hari. Kualitas air pemeliharaan nila merah menggunakan air buangan budidaya udang vaname masih sesuai untuk kehidupan nila merah, kecuali ammonia (NH3) dan *Total Organic Matter* (TOM).

Kata kunci: air limbah udang, kualitas air, nila merah, pertumbuhan, sintasan

Abstract

SURVIVAL AND GROWTH RATE OF RED TILAPIA (*Oreochromis* sp.) CULTURE USING WHITELEG SHRIMP WASTEWATER

This research aims to determine the survival and growth rate of red tilapia (*Oreochromis* sp.) as well as the quality of water quality of the culture using the wastewater of whiteleg shrimp (*Litopenaeus vannamei*). This research used the experimental method with a completely rondomized design (CRD) consist of 3 different stocking densities of 20 fishes/m3, 30 fishes/m3 and 40 fishes/m3 with two replication each. Red tilapia stocked with a size of 5-7 cm and an average weigth of 1.96 g. Shrimp wastewater distributed as much as 10 liters every two days into the breeding tank of the red tilapia for 75 days. The observation of the length and individual weight of fish, as well as water quality, had done every 14 days. The result showed that 20 fishes/m3 density gave the best survival of 90,59 % ($P<0,05$) compared to other treatments. The length growth: absolute length of 3.91 cm, specific length of 0.77 %/day and daily length of 0.05 cm/day. While the absolute weight, specific weight and daily weight as of 8.53 g, 2.41 %/day, and 0.11 g/day, respectively. The water quality parameters of red tilapia culture using wastewater of whiteleg shrimp was still suitable for the life of red tilapia, except for ammonia (NH3) and total organic matter (TOM).

Key words: growth, red tilapia, shrimp wastewater, survival, water quality