RINGKASAN

Mufti M. Masudede Npm.05171811012**. Kinerja Pertumbuhan dan Kualitas Air Ikan Nila Merah Salin (*Oreochromis niloticus*) Pada Sistem Bioflok Dengan Rasio C/N Berbeda.** Program Studi Budidaya Perairan, Fakultas Perikanan dan Ilmu Kelautan, Universitas Khairun. Di bawah bimbingan Dr. Waode Munaeni, S.Pi., M.Si dan Sudirto Malan S.Pi., M.P.

Ikan nila merah salin (*Oreochromis nilotcus*) merupakan jenis ikan ekonomis dan potensial karena memiliki toleransi terhadap salinitas. Penelitian ini bertujuan untuk mendapatkan rasio C/N yang optimal terhadap kinerja pertumbuhan dan kualitas air ikan nila merah salin (*Oreochromis niloticus*) pada sistem bioflok. Rancangan penelitian ini menggunakan rancangan acak lengkap (RAL) dengan 4 perlakuan dan 3 ulangan. Ikan nila dipelihara pada salinitas 10 ppt dengan rasio C/N berbeda yang terdiri dari rasio C/N 13 (A), 16 (B), dan 19 (C), serta kontrol atau tanpa bioflok (D). Hasil penelitian menunjukkan bahwa rasio C/N berbeda dapat mempengaruhi laju pertumbuhan spesifik dan rasio konversi pakan pada ikan nila merah salin serta mempengaruhi volume flok dan kualitas air dengan rasio C/N 13. Aplikasi rasio C/N berbeda tidak berpengaruh terhadap pertumbuhan mutlak dan kelangsungan hidup ikan nila merah salin. Laju pertumbuhan spesifik pada perlakuan A signifikan lebih tinggi ($P<0,05$) dibandingkan dengan perlakuan lainnya, sedangkan perlakuan B, C, dan D tidak berbeda nyata ($P>0,05$). Laju pertumbuhan spesifik perlakuan A sebesar 2,47 ±0,41%, perlakuan B sebesar 1,68 ±0,23%, perlakuan C sebesar 1,78 ±0,25% dan perlakuan D sebesar 1,20 ±0,13%. Pertumbuhan mutlak perlakuan A, B, C dan D tidak berbeda nyata ($P>0,05$). Rasio konversi pakan perlakuan A, B, dan C tidak berbeda nyata ($P>0,05$), namun berbeda nyata ($P<0,05$) dengan perlakuan D. Kelangsungan hidup ikan nila merah salin tertinggi pada perlakuan A sebesar 73.33%, C sebesar 73.33%, D sebesar 70.00% dan B sebesar 66.67%. Kisaran kualitas air semua perlakuan meliputi: suhu 28.3-30.7ºC, pH 7, 16-7,87, DO 6.09-6.69 ppm, nitrat 0,00-0,05mg/L, nitrit 0.00-0.05mg/L, amoniak 0,0-0,01.

Kata Kunci: Bioflok, rasio C/N, *Oreochromis niloticus*, pertumbuhan.

RINGKASAN

MUFTI M. MASUDEDE Npm.05171811012. Growth Performance and Water Quality of Saline Red Tilapia (Oreochromis niloticus) in the Biofloc System with Different C/N Ratios. Aquaculture Study Program, Faculty of Fisheries and Marine Sciences, Khairun University. Under the guidance of **Dr. WAODE MUNAENI, S.Pi., M.Si and SUDIRTO MALAN S.Pi., M.P**

Salted red tilapia (Oreochromis nilotcus) is an economical and potential type of fish because it has tolerance to salinity. This research aims to obtain the optimal C/N ratio for the growth performance and water quality of saline red tilapia (Oreochromis niloticus) in a biofloc system. This research design used a completely randomized design (CRD) with 4 treatments and 3 replications. Tilapia fish were reared at a salinity of 10 ppt with different C/N ratios consisting of C/N ratios of 13 (A), 16 (B), and 19 (C), as well as control or without biofloc (D). The results showed that different C/N ratios could influence the specific growth rate and feed conversion ratio of saline red tilapia as well as influence floc volume and water quality with a C/N ratio of 13. The application of different C/N ratios had no effect on absolute growth and survival. live salted red tilapia fish. The specific growth rate in treatment A was significantly higher ($P<0.05$) compared to the other treatments, while treatments B, C, and D were not significantly different ($P>0.05$). The specific growth rate of treatment A was 2.47 ± 0.41%, treatment B was 1.68 ± 0.23%, treatment C was 1.78 ± 0.25% and treatment D was 1.20 ± 0.13% . The absolute growth of treatments A, B, C and D was not significantly different ($P>0.05$). The feed conversion ratio for treatments A, B, and C was not significantly different ($P>0.05$), but was significantly different ($P<0.05$) from treatment D. The highest survival rate of saline red tilapia in treatment A was 73.33%, C of 73.33%, D of 70.00% and B of 66.67%. The water quality range for all treatments includes: temperature 28.3-30.7oC, pH 7, 16-7.87, DO 6.09-6.69 ppm, nitrate 0.00-0.05mg/L, nitrite 0.00-0.05mg/L, ammonia 0, 0-0.01.

Keywords: Biofloc with different C/N ratios Oreochromis niloticus, growth