INTISARI

PERFORMA BENIH NILA MERAH (*Oreochromis* sp.) HASIL PERSILANGAN STRAIN NILASA DAN *RED NIFI* PADA PENDEDERAN I

Penelitian ini bertujuan untuk mengetahui perfoma benih nila merah hasil persilangan antara strain Nilasa dan *Red NIFI* yang meliputi laju sintasan, pertumbuhan rasio konversi pakan pada pendederan I serta mengetahui benih dengan performa terbaik berdasarkan pertumbuhan. Penelitian dilaksanakan dengan metode eksperimental menggunakan Rancangan Acak Lengkap yang terdiri atas empat perlakuan yang masing-masing diulang sebanyak tiga kali. Perlakuan dalam penelitian ini yaitu benih nila merah hasil dari persilangan ♀Nilasa × ♂Nilasa, ♀Nilasa × ♂ *Red NIFI*, ♀ *Red NIFI* × ♂ *Red NIFI*, dan ♀ *Red NIFI* × ♂Nilasa. Rerata ukuran tebar benih yang digunakan yaitu 0,58 g dan 3,13 cm dengan padat tebar 100 ekor/m^3. Benih dipelihara di dalam media hapa (#3–4 mm) berukuran 2x2x1 m^3 dengan kedalaman air 60 cm selama 1,5 bulan. Benih diberi pakan butiran kecil sebanyak 10-15% dari total biomassa. Panjang dan berat benih diamati setiap dua minggu dan kualitas air dianalisis pada awal dan akhir pemeliharaan. Hasil pengamatan panjang dan berat kemudian diuji dengan analisis sidik ragam (ANOVA) kemudian dilanjutkan dengan *Duncan's Multiple Range Test* apabila terdapat perbedaan signifikan. Dari hasil penelitian, benih nila merah memiliki laju sintasan berkisar 69,67-94,50%, pertumbuhan panjang dan bobot mutlak 3,284-4,024 cm dan 3,831- 5,779 g, pertumbuhan panjang dan bobot spesifik 1,708-1,968% and 4,830-5,701% dan FCR 1,152-1,302. Terdapat perbedaan yang signifikan di antara keempat perlakuan pada laju sintasan dan pertumbuhan (P<0,05), sedangkan tidak pada FCR (>0,05). Hasil heterosis menunjukkan bahwa perlakuan *outbreeding* memberikan nilai positif pada pertumbuhan. Benih nila merah dengan performa terbaik ♀Nilasa × ♂*Red NIFI*, dengan nilai pertumbuhan 5,321%.

Kata kunci: konversi pakan, laju sintasan, nila merah, Nilasa, pendederan, pertumbuhan, *Red NIFI*

ABSTRACT

PERFORMANCE OF RED TILAPIA (*Oreochromis* sp.) SEEDS FROM NILASA AND RED NIFI STRAIN CROSSES IN THE FIRST REARING STAGE

The aim of this study is to determine red tilapia seed performance from Nilasa and *Red NIFI* crosses which included survival rate, growth, and food rate conversion in the fisrt rearing stage also to knowing seed with the best perfomance. The study was conducted by experimental methods using a Completely Randomized Design which consisted of four treatment and three repetition. The treatments of this study were red tilapia seed from cross of ♀Nilasa × ♂Nilasa, ♀Nilasa × ♂*Red NIFI*, ♀*Red NIFI* × ♂*Red NIFI*, and ♀*Red NIFI* × ♂Nilasa.The seeds measuring 3 cm long and weighing 0,6 g were stocked 100 individuals/m^3. Seeds reared in hapa (# 2 mm) with 2×2×1 m^3 dimension and water depth of 60 cm for 42 days at Balai Pengembangan Teknologi Perikanan Budidaya (BPTPB) Yogyakarta. Seeds and weight were observed every two weeks and water quality was analyzed at the beginning and end of rearing. The results of the length and weight observations were then tested by analysis of variance (ANOVA) and then continued with Duncan's Multiple Range Test if there were significant differences. During the study, red tilapia seeds had survival range of 69.67-94.50%, length and weight growth 3.284-4.024 cm and 3.831-5.779 g, specific length and weight growth rate of 1.708-1.968% and 4.830-5.701%, and FCR 1.152-1.302. There was a significant difference between the four treatments in survival and growth rates ($P<0.05$), whereas FCR was not (>0.05). The heterosis showed that the outbreeding treatmens give positive effect on growth and red tilapia seed with the best performance shown in ♀CK-♂SB combination with growth rate of 5,779%.

Keyword: feed conversion, growth, Nilasa, Red NIFI, red tilapia, rearing, survival rate