

## Intisari

### PERFORMA BENIH NILA MERAH (*Oreochromis* sp.) HASIL PEMIJAHAN SILANG STRAIN *RED NIFI* DENGAN PANDU PADA PENDEDERAN II

Penelitian ini bertujuan untuk mengetahui sintasan, pertumbuhan, rasio konversi pakan dan nilai heterosis benih nila merah hasil pemijahan silang strain *Red NIFI* (SM) dari Sukamandi dengan Pandu (JT) dari Janti secara *inbreeding* (SM♀ - SM♂ dan JT♀ - JT♂), dan *outbreeding* (SM♀ - JT♂ dan JT♀ - SM♂) pada pendederan 2. Penelitian dilakukan menggunakan metode rancangan acak lengkap dengan empat perlakuan dan tiga ulangan. Ukuran benih yang ditebar berkisar 3,85 - 4,33 g dan panjang 6,34 - 6,46 cm yang merupakan benih hasil pendederan 1. Benih dipelihara dalam hapa berukuran 2x1x1 m<sup>3</sup> kedalaman air 60 cm dan padat tebar 50 ekor/m<sup>3</sup>. Penelitian dilakukan selama 42 hari di bulan November sampai Desember 2022 di Balai Pengembangan Teknologi Perikanan Budidaya Cangkringan, Sleman, Daerah Istimewa Yogyakarta. Frekuensi pemberian pakan sebanyak dua kali sehari dengan dosis 5-10% berdasarkan biomassa ikan. Pengamatan jumlah, panjang dan berat individu dilakukan secara sampling setiap dua minggu. Data sintasan, pertumbuhan dan rasio konversi pakan dianalisis dengan analisis varian dan diuji dengan *Duncan's Multiple Range Test*. Data heterosis diuji secara deskriptif. Hasil penelitian diperoleh: sintasan berkisar 94–96%, pertumbuhan mutlak berbasis panjang 2,67–3,31 cm, pertumbuhan mutlak berbasis berat 8,12–10,25 gram, laju pertumbuhan spesifik 2,52–2,88 %/hari, serta rasio konversi pakan 2,08-2,69. Nilai heterosis benih nila merah hasil persilangan *outbreeding* terhadap persilangan *inbreeding* mengungguli pertumbuhan mutlak, laju pertumbuhan spesifik dan rasio konversi pakan.

Kata kunci: benih nila merah, heterosis, pertumbuhan, rasio konversi pakan, sintasan.

### *Abstract*

#### SEED PERFORMANCE OF RED TILAPIA (*Oreochromis* sp.) CROSSES BETWEEN *RED NIFI* AND PANDU STRAINS IN THE SECOND REARING STAGE

This research aims to know the survival, growth, feed conversion ratio and heterosis value of red tilapia seed from crosses between *Red NIFI* (SM) strain from Sukamandi with Pandu (JT) from Janti by inbreeding (SM♀ - SM♂ and JT♀ - JT♂), and outbreeding (SM♀ - JT♂ and JT♀ - SM♂) in the second rearing stage. The study was organized using a completely randomized design with four treatments and three replications. The size of red tilapia seed stocked ranged from 3,85 to 4,33 g and 6,34 to 6,46 cm in length, which were the result of first rearing stage. Red tilapia seeds are reared using 2x2x1 m<sup>3</sup> hapa, 60 cm water depth, and a stocking density of 50 seeds per m<sup>3</sup>. The study lasted for 42 days from November to December 2022 at the Center for Aquaculture Technology Development in Cangkringan, Sleman, Yogyakarta. The frequency of feeding was twice a day with a dose of 5-10% based of fish biomass. Observations of the number, length and weight of individuals were made by sampling every two weeks. Data on survival, growth, and feed conversion ratio were analyzed by analysis of variance and tested by Duncan's Multiple Rnge Test. Heterosis data were test descriptively. The result obtained: survival ranged from 94-96%, absolute growth based of length 2,67–3,31 cm and absolute growth based of weight 8,12–10,25 grams, specific growth rate 2,52–2,88 %/day, and feed conversion ratio 2,08-2,69. The heterosis value of red tilapia seeds from outbreeding to inbreeding crosses can outperform in absolute growth, specific growth rate and feed conversion ratio.

Keywords: feed conversion ratio, growth, heterosis, red tilapia, survival rate