

## INTISARI

### Performa Hasil Pemijahan Silang Nila Merah (*Oreochromis sp.*) Strain Nilasa dengan *Red NIFI*

Penelitian ini bertujuan untuk mengetahui performa hasil pemijahan silang strain Nilasa dengan *Red NIFI* meliputi: jumlah telur, ukuran telur, jumlah larva, dan ukuran larva. Penelitian dilakukan dengan percobaan pemijahan yang disusun menggunakan metode rancangan acak lengkap dengan 4 perlakuan dan 3 ulangan. Perlakuan terdiri atas pemijahan *outbreeding* Nilasa♀ - *Red NIFI*♂ dan *Red NIFI*♀ - Nilasa♂, serta *inbreeding* Nilasa♀ - Nilasa♂ dan *Red NIFI*♀ - *Red NIFI*♂. Pemijahan dilakukan menggunakan hapa (#3-4 mm) ukuran 2x1x1 meter yang dipasang dalam kolam semi permanen. Kedalaman air kolam 80 cm dan hapa 40 cm. Induk yang digunakan berdasarkan seleksi individu dengan bobot 300-400 g/ekor untuk induk betina dan 400-600 g/ekor untuk induk jantan. Frekuensi pemberian pakan sebanyak 2 kali sehari dengan dosis 1-2% berdasarkan biomasa ikan. Pengamatan jumlah telur, ukuran telur, jumlah larva, dan ukuran larva secara sampling dengan penyamaan bobot induk 1 kg. Pengamatan dilakukan dalam 1 cohort atau 1 minggu sejak larva dikeluarkan, sedangkan pengamatan kualitas air pada awal dan akhir pemijahan. Data dianalisis menggunakan analisis varians dan diuji dengan *Duncan's Multiple Range Test*. Data kualitas air diinterpretasikan secara deskriptif. Hasil penelitian yang diperoleh: jumlah telur berkisar 4000-8387 butir/kg, diameter panjang telur 2,3-2,7 mm, diameter lebar telur 2-2,3 mm, jumlah larva 3043-7805 ekor/kg, dan ukuran larva 8,2-10 mm. Hasil penelitian dapat disimpulkan bahwa tidak semua pemijahan silang *outbreeding* menghasilkan performa pemijahan yang lebih baik dibandingkan dengan *inbreeding*. Perlakuan terbaik didapat pada kombinasi *Red NIFI*♀ - Nilasa♂ dengan jumlah telur  $6530 \pm 1133,1$  butir/kg, ukuran telur (diameter panjang  $2,5 \pm 0,11$  mm, diameter lebar  $2,1 \pm 0,05$  mm), jumlah larva  $6381 \pm 396,9$  ekor/kg dan panjang larva  $9 \pm 0,8$  mm. Kualitas air memenuhi syarat untuk pemijahan nila merah.

Kata kunci: Pemijahan silang, Strain Nilasa, Strain *Red NIFI*.

## ABSTRACT

### Crossbreed Performance of Red Tilapia (*Oreochromis sp.*) Nilasa with Red NIFI

This study aimed to determine the performance of cross spawning results of Nilasa and Red NIFI strains including: fecundity, egg size, number of larvae, and larval size. The research was conducted with a spawning experiment arranged using the complete randomized design method with 4 treatments and 3 replicates. Treatments consisted of outbreeding Nilasa♀ - Red NIFI♂ and Red NIFI♀ - Nilasa♂, and inbreeding Nilasa♀ - Nilasa♂ and Red NIFI♀ - Red NIFI♂. Crossbreed was conducted using 2x1x1 meter hapa (#3-4 mm) installed in a semi-permanent pond. The pond water depth was 80 cm and the hapa was 40 cm. Broodstock Nilasa used were based on individual selection with weights of 300-400 g/head for females and 400-600 g/head for males. The frequency of feeding was 2 times a day with a dose of 1-2% based on fish biomass. Observations of fecundity, egg size, number of larvae, and larval size were made by sampling with an equalized parent weight of 1 kg. Observations were made in 1 cohort or 1 week from the time the larvae were released, while water quality observations were made at the beginning and end of spawning. Data were analyzed using analysis of variance and tested with Duncan's Multiple Range Test. Water quality data were interpreted descriptively. The results obtained: fecundity ranged from 4000-8387 eggs/kg, egg length diameter 2.3-2.7 mm, egg width diameter 2-2.3 mm, number of larvae 3043-7805 fish/kg, and larval size 8.2-10 mm. The results can be concluded that not all outbreeding crossbreeding produces better spawning performance than inbreeding. The best treatment was obtained in the Red NIFI♀ - Nilasa♂ combination with fecundity of  $6530 \pm 1133.1$  eggs/kg, egg size (length diameter  $2.5 \pm 0.11$  mm, width diameter  $2.1 \pm 0.05$  mm), number of larvae  $6381 \pm 396.9$  fish/kg and larval length  $9 \pm 0.8$  mm. Water quality meets the requirements for red tilapia spawning.

**Keywords:** Crossbreed, Nilasa Strain, Red NIFI Strain.