

INTISARI

Performa Hasil Pemijahan Silang Nila Merah (*Oreochromis sp.*) Strain Sukamandi dengan Janti

Pengembangan budidaya ikan nila merah memerlukan benih dalam jumlah cukup dan berkualitas. Namun, dalam perkembangannya menghadapi masalah penurunan performa indukan karena pengelolaan yang kurang tepat dan adanya *inbreeding* (kawin kerabat). Penelitian ini bertujuan untuk mengetahui performa pemijahan silang induk Sukamandi (SM) dengan Janti (JT), meliputi : fekunditas, ukuran telur, jumlah dan panjang larva, serta menentukan strain terbaik berdasarkan performa pemijahan. Penelitian dilakukan dengan percobaan yang disusun menggunakan metode rancangan acak lengkap. Perlakuan terdiri atas pemijahan silang luar (*outbreeding*) SM(♀) – JT(♂) dan JT(♀)-SM(♂), dan silang dalam (*inbreeding*) SM(♀)-SM(♂) dan JT(♀)-JT(♂), masing-masing diulang tiga kali. Pemijahan menggunakan hapa (# 3-4 mm) ukuran 2x1x1 meter yang dipasang dalam kolam semi permanen. Kedalaman air kolam 80 cm dan hapa 40 cm. Induk betina yang digunakan memiliki rata-rata berat 300-400 g dan jantan 400-600 g. Pakan buatan kadar protein 32-34% diberikan 2 kali sehari sebanyak 1-2% biomasa per hari. Pengamatan jumlah dan ukuran telur, serta jumlah dan panjang larva yang dihasilkan dalam 1 cohort atau dalam kisaran satu minggu sejak larva dikeluarkan, sedangkan pengamatan kualitas air pada awal dan akhir pemijahan. Data dianalisis menggunakan analisis varian dan bila ada beda nyata diuji lanjut dengan tes Duncan dengan tingkat signifikansi 95%, sedangkan kualitas air dianalisis secara deskriptif. Hasil penelitian yang diperoleh: fekunditas 1671-7483 butir/kg; ukuran telur diameter panjang 2,4-2,6 mm, diameter pendek 2,1-2,2 mm; jumlah larva 1191-6737 ekor/kg dan panjang larva 9-11 mm. Hasil penelitian dapat disimpulkan bahwa tidak semua pemijahan silang *outbreeding* menghasilkan performa pemijahan yang lebih baik dibandingkan dengan *inbreeding*. Perlakuan SM(♀)-JT(♂) adalah hasil terbaik dengan performa fekunditas terbanyak 6530±1133,1/kg, ukuran telur (diameter panjang 2,5±0,11 mm, diameter pendek 2,1±0,05 mm), jumlah larva 6381±396,9/kg dan panjang larva 9±0,8 mm.

Kata kunci: Pemijahan silang, Performa, Strain Sukamandi, Strain Janti.

ABSTRACT

Cross Spawning Performance of Red Tilapia (*Oreochromis sp.*) Sukamandi with Janti Strains

The development of red tilapia aquaculture requires a sufficient number of quality seeds. However, in its development it faces the problem of decreasing broodstock performance due to improper management and inbreeding. This study aims to determine the cross-spawning performance of Sukamandi (SM) and Janti (JT) broodstock, including: fecundity, egg size, number and length of larvae, and determine the best strain based on spawning performance. The research was conducted with experiments arranged using the complete randomized design method. Treatments consisted of outbreeding SM(♀)-JT(♂) and JT(♀)-SM(♂), and inbreeding SM(♀)-SM(♂) and JT(♀)-JT(♂), each repeated three times. Spawning used hapa (# 3-4 mm) 2x1x1 meter in size installed in a semi-permanent pond. The pond water depth was 80 cm and the hapa was 40 cm. The female broodstock used had an average weight of 300-400 g and the male 400-600 g. Artificial feed with a protein content of 32-34% was fed twice a day at 1-2% of biomass per day. Observations of the number and size of eggs, as well as the number and length of larvae produced in 1 cohort or within one week from the time the larvae were released, while observations of water quality at the beginning and end of spawning. Data were analyzed using analysis of variance and if there was a significant difference, it was further tested with Duncan's test with a significance level of 95%, while water quality was analyzed descriptively. The results obtained: fecundity 1671-7483 grains/kg; egg size 2.4-2.6 mm long diameter, 2.1-2.2 mm short diameter; number of larvae 1191-6737 fish/kg and larval length 9-11 mm. The results can be concluded that not all outbreeding crossbreeding resulted in better spawning performance compared to inbreeding. The SM(♀)-JT(♂) treatment was the best result with the highest fecundity performance of 6530 ± 1133.1 /kg, egg size (long diameter 2.5 ± 0.11 mm, short diameter 2.1 ± 0.05 mm), number of larvae 6381 ± 396.9 /kg and larval length 9 ± 0.8 mm.

Key words: Cross spawning, Performance, Sukamandi strain, Janti strain.