

## Intisari

Penelitian ini bertujuan untuk mengetahui pengaruh lama waktu penggunaan aerasi *Microbubble Generator* (MBG) terhadap perkembangan gonad dan performa pemijahan nila merah (*Oreochromis sp.*) strain nilasa. Metode yang digunakan adalah eksperimen dengan rancangan acak kelompok lengkap. Perlakuan yang terdiri atas empat lama waktu penggunaan MBG: 24 jam, 12 jam, 8 jam dan tanpa aerasi MBG, masing diulang 3 kali. Pemijahan menggunakan kolam ukuran 4 m x 5 m, kedalaman air 0,8 m dipasang 2 unit MBG. Induk betina ukuran  $\pm 140$  g dan jantan  $\pm 156$  g dipijahkan dengan rasio 1 : 3 dan kepadatan 3 ekor/m<sup>2</sup>. Induk betina ditebar terlebih dahulu untuk pematangan gonad selama 15 hari, kemudian induk jantan ditebarkan untuk pemijahan selama 15 hari. Pakan berupa pelet terapung diberikan 1-2% biomas diberikan 2 kali sehari, pagi dan sore. Data Indeks Kematangan Gonad (IKG), fekunditas dan jumlah larva dianalisis secara statistik menggunakan analisis keragaman ANOVA (*Analysis of Varians*) dengan ketelitian 95%, sedangkan data tingkat kematangan gonad dianalisis secara deskriptif. Hasil penelitian menunjukkan bahwa lama waktu penggunaan MBG, 8-24 jam berpengaruh ( $P < 0,05$ ) terhadap IKG, fekunditas dan jumlah larva nila merah serta secara faktual terhadap TKG tetapi tidak berpengaruh terhadap jumlah telur ( $P > 0,05$ ). Lama waktu penggunaan MBG selama 12 jam merupakan perlakuan terbaik dengan IKG sebesar  $4,83 \pm 1,38\%$ , rerata fekunditas 2.876 butir dan jumlah larva terbanyak sebesar 8.906 ekor, namun jumlah telur per induk terbanyak dengan lama waktu penggunaan MBG selama 24 jam dengan nilai fekunditas 374 butir/induk.

Kata kunci : lama waktu , MBG, nila merah nilasa, pemijahan, perkembangan gonad

### ***Abstract***

*The study aimed to determine the effect of duration of microbubble generator (MBG) aeration use on gonad development and spawning performances of red tilapia (*Oreochromis sp.*) nilasa strain. Randomized completely block design was used in the experiment. The treatment consisted of four periods of MBG usage: 24 hours, 12 hours, 8 hours and without MBG aeration as a control, and repeated 3 times each. Ponds of 4 m x 5 m with 0,8 m water depth and 2 sets of MBG were used for experiment. Female brooders sizing of  $\pm 140$  g and males  $\pm 156$  g were use for spawning in rasion of 1 : 3 and density of 3 /m<sup>2</sup>. Females were stocked first for gonad maturation for 15 days, and male brooders afterwards for spawning for 15 days. Floating pellets feed was given 1-2% of biomass twice a day, morning and evening. Gonadosomatic Index (GSI), fecundity, number of incubated eggs and larvae were statistically analyzed using analysis of variance with 95% accuracy, while gonad maturity level data were analyzed descriptively. The results showed that the length of time to use MBG, 8-24 hours had an effect ( $P < 0.05$ ) on GSI, fecundity and the number of red tilapia larvae and the level of maturity gonad had no effect on the number of eggs ( $P > 0.05$ ). The duration of MBG aeration use for 12 hours was the best treatment with GSI of  $4.83 \pm 1.38\%$ , the average fecundity of 2,876 eggs and the highest number of larvae of 8,906 fish, but the highest number of eggs per broodstock with duration of MBG aeration use for 24 hours with a fecundity of 374 eggs/ broodstock.*

*Keywords: duration, MBG aeration, red-tilapia nilasa strain, gonad development, spawning*