

## ABSTRACT

**MOHAMMAD HIMAWAN. A.1610810.** Growth rate and Survival rate of interspecific cross-breeding seeds from three species of Tor (*Tor soro*, *Tor tambroides* and *Tor douronensis*). Under Supervision of Fia Sri Mumpuni and Otong Zenal Arifin.

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Fish of the Tor genera is one of the potential commodities to be developed because of their highly economic value. This research is aimed to find out the growth rate and survival rate of interspecific cross-breeding seeds from three species of Tor (*Tor soro*, *Tor tambroides* and *Tor douronensis*). Crosses were carried in two directions (reciprocal) and form 9 populations. The observations of length growth, weight growth, specific length growth rate, specific weight growth rate and heterosis were carried out for 4 months (December 2019-March 2020). This research was conducted at Freshwater Fishery Germplasm Research Installation at Cijeruk Subdistrict, Bogor District. Data were analyzed using analysis of variance (ANOVA) and Duncan's multiple range test. The results of this research showed that the highest increase of absolute length growth, absolute weight growth, specific length growth rate and survival rate occurred in the seed produced from female *Tor tambroides* ( $\text{♀Tt}$ ) x male *Tor douronensis* ( $\text{♂Td}$ ) with consecutive values of 1,67 cm, 0,78 g, 0,56%/day, and 97%. The highest value of heterosis for the final long character was produced from the seeds of the two-way cross (reciprocal) between  $\text{♀Tt}$  x  $\text{♂Td}$  (12,8%) and  $\text{♀Ts}$  x  $\text{♂Td}$  (12,8%). In the absolute growth rate character, the highest heterosis value is generated from two-way cross between  $\text{♀Ts}$  x  $\text{♂Tt}$  (24,1%). However, in the specific growth rate character, the highest heterosis value is generated from two-way cross between  $\text{♀Ts}$  x  $\text{♂Tt}$  (17,7%).

Keyword : Crossing, Heterosis, Interspecific, Reciprocal, Tor.

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## ABSTRAK

**MOHAMMAD HIMAWAN. A.1610810.** Pertumbuhan dan Kelangsungan Hidup Benih Tiga Spesies Ikan Tor (*Tor soro*, *Tor tambroides* dan *Tor douronensis*) dari Hasil Persilangan Secara Resiprokal. Dibawah bimbingan Fia Sri Mumpuni dan Otong Zenal Arifin.

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Ikan Tor merupakan salah satu komoditas potensial untuk dikembangkan karena bernilai ekonomis. Penelitian ini bertujuan untuk mengetahui laju pertumbuhan dan kelangsungan hidup benih hasil persilangan interspesifik dari tiga spesies ikan Tor (*Tor soro*, *Tor tambroides* dan *Tor douronensis*). Persilangan dilakukan secara dua arah (resiprokal) dan membentuk sembilan populasi. Pengamatan pertumbuhan panjang, pertumbuhan bobot, laju pertumbuhan panjang spesifik, laju pertumbuhan bobot spesifik dan nilai heterosis dilakukan selama 4 bulan (Desember 2019-Maret 2020). Penelitian ini dilaksanakan di Instalasi Riset Plasma Nutfah Perikanan Air Tawar Cijeruk, Bogor. Data dianalisis menggunakan analisis ragam (ANOVA) dan uji Duncan. Hasil penelitian menunjukkan peningkatan tertinggi pada karakter pertumbuhan panjang mutlak, pertumbuhan bobot mutlak, laju pertumbuhan panjang spesifik dan kelangsungan hidup terjadi pada benih hasil persilangan induk betina *Tor tambroides* (♀Tt) dan jantan *Tor douronensis* (♂Td) dengan nilai berturut-turut sebesar 1,67 cm, 0,78 g, 0,56 %/hari dan 97%. Nilai heterosis tertinggi untuk karakter panjang akhir, dihasilkan dari benih hasil persilangan dua arah (resiprokal) antara Tt dengan Td (12,8%) dan Ts dengan Td (12,8%). Pada karakter laju pertumbuhan mutlak, nilai heterosis tertinggi dihasilkan dari persilangan dua arah antara Ts dengan Tt (24,1%). Pada karakter laju pertumbuhan spesifik, nilai heterosis tertinggi dihasilkan dari persilangan dua arah antara Ts dengan Tt (17,7%).

*Kata kunci* : Heterosis, Interspesifik, Persilangan, Resiprokal, Tor.

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