

**Comparative Development and Larval Performance of Catfish Hybrids
(*Clarias macrocephalus* Günther x *Clarias gariepinus* Burchell)**

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ABSTRACT

Our native catfish, *Clarias macrocephalus*, is one of the most well-accepted fish in the country. With its soft and savory flesh, this species has high demand in local markets. However, due to its relatively slow growth and poor breeding activity, our native catfish has become rarely used nowadays in aquaculture. This led to the introduction of exotic and faster growing species like the African catfish, *Clarias gariepinus*, and Thai catfish, *Clarias batrachus*, which in turn, resulted to the near extinction of the native species. There is therefore a perceived need to undertake a breeding program involving this native catfish and other exotic species.

One potential solution to increase our production rate of the native catfish is to hybridize it with the African catfish. Interspecific hybridization has been a popular breeding program utilized by researchers attempting to produce fish expressing hybrid vigor (positive heterosis) or for combining valuable traits from more than one species.

This study is on the characterization of the early developmental stages of fertilized eggs and the comparison of larval performance (in terms of percent fertilization, hatching and larval survival) resulting from the artificial cross of *Clarias macrocephalus* (native catfish) and *Clarias gariepinus* (African catfish) and its parental species.

In comparing the rates of egg development among crosses (all macrolecithal and discoidal cleavage), it was determined that fertilized eggs of the standard hybrid cross (*C. gariepinus* male x *C. macrocephalus* female) have a relatively faster rate of development than those from the reciprocal cross (*C. macrocephalus* male x *C. gariepinus* female).

Results on determination of larval performance showed that there is no significant difference in percent fertilization and percent survival after 7 days between hybrid and parental crosses. However, in terms of percent hatching, the reciprocal hybrid cross (*C. macrocephalus* male x *C. gariepinus* female), together with the *C. gariepinus* x *C. gariepinus* parental cross had a significantly higher percent hatching ($P < 0.01$) compared to the standard cross (*C. gariepinus* male x *C. macrocephalus* female).