

## A STUDY ON THE FEASIBILITY OF GROWING THREE ORNAMENTAL FISH SPECIES IN ABANDONED CORAL PITS AND RESERVOIRS

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Feasibility of growing guppy (*Poecilia reticulata*), platy (*Xiphophorus maculatus*) and swordtail (*Xiphophorus helleri*) in abandoned coral pits at Hikkaduwa and in Udukiriwila reservoir under net cage (2m x 1m x 1m) culture was studied by growth and survival of each species. Fry/fingerlings of the three species were stocked in separate cages (375 fish cage<sup>-1</sup>) at both sites and three production cycles were studied employing commercially available feed (Tropical fish feed - Flake No. 1, manufactured by Ceylon Grain Elevators) at a rate of 5% body weight given in three meals (at 08.00, 13.00 and 17.00 hours). Growth was measured in terms of increase of total length by obtaining weekly samples and water quality was measured at weekly intervals at both sites. Survival of each species at each culture site over the three production cycles was recorded.

Dissolved oxygen, pH, temperature, total ammonia, total nitrite, total alkalinity and total hardness of water prevailed at coral pits and the reservoir were acceptable for fish culture. There were no significant differences between mean percentage survival of guppy and platy, and platy and swordtail ( $p > 0.05$ ). But survival recorded for swordtail ( $77.53\% \pm 20.80$ ) was significantly higher ( $p < 0.05$ ) than that of guppy ( $44.63\% \pm 9.88$ ) cultured in net cages in coral pits. In the reservoir, mean percentage survival observed for guppy, platy and swordtail ( $53.03\% \pm 11.64$ ,  $52.49\% \pm 9.92$ ) and  $64.03\% \pm 13.15$  respectively) was not significantly different from each other ( $p > 0.05$ ).

All three species grew up to their marketable size around 60 days at both sites. There were no significant differences between specific growth rate of guppy, platy and swordtail ( $p > 0.05$ ) recorded for coral pits and the reservoir when two sites were considered separately. However, specific growth rates estimated for guppy, platy and swordtail were significantly higher at Udukiriwila reservoir ( $1.04 \pm 0.11$ ,  $1.11 \pm 0.06$  and  $0.89 \pm 0.19$  respectively) than that of the coral pits ( $0.76 \pm 0.16$ ,  $0.76 \pm 0.08$  and  $0.66 \pm 0.05$  respectively).