

**EFFECTS OF pH ON EGG HATCHABILITY,
SURVIVAL RATE AND GROWTH RATE OF YOLK
SAC LARVAE OF GOLDFISH (*Carassius auratus*)**

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ABSTRACT

Water pH is an important water quality parameter which has a profound effect on fish eggs and larvae than adult fishes. Present study was conducted to examine the effect of water pH on egg hatchability, survival rate and growth rate of yolk sac larvae of goldfish (*Carassius auratus*). The goldfish, one of the earliest fish to be domesticated, is among the most popular fresh water ornamental fish species. Experiment was carried out with five pH treatment levels having pH levels of 5.5 ± 0.1 , 6.5 ± 0.1 , 7.5 ± 0.1 (control), 8.5 ± 0.1 , 9.5 ± 0.1 , with three replicates for each. Forty goldfish eggs were placed in each replicate. No significant difference was observed in egg hatchability, survival rate and growth rate of yolk sac larvae of goldfish in the pH range of 5.5 – 9.5. Egg hatchability was varied with the mean value of 87.50 – 97.50. Survival rate was varied from 85.82 to 98.29. Lowest hatchability and survival rate was observed in pH 5.5, while highest values were observed in pH 7.5. Yolk sac absorption rate or growth rate was varied from 78.59 to 96.42, with lowest growth rate in pH 5.5 and highest growth rate in pH 8.5. Most of the fresh water sources in Sri Lanka have the pH range of 5.4 -9.0, it is possible to culture goldfish throughout the country as an ornamental fish. To attain highest productivity it is better to use slightly alkaline water.