



## Salinity Tolerance and Survival of Freshwater Carp, *Cyprinus carpio* Linn. in Inland Saline Water

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**Abstract:** The present study was carried out to assess salinity tolerance and survival of freshwater carp, *Cyprinus carpio* (Linn.) in inland saline water. Fingerlings of *C. carpio* (10-12 cm) were exposed to different salinities viz., 0, 2, 4, 6, 8 and 10 g l<sup>-1</sup> (ppt) for 10 days after gradual acclimatisation with salinity increase @ 1 ppt hr<sup>-1</sup>. Inland saline water (15 ppt) was lifted from salt affected water logged area in village Shajrana of district Fazilka (Punjab) and diluted with underground fresh water (0ppt) for preparation of different salinity treatments. Physico-chemical parameters of inland saline water and different salinity treatments were analysed with respect to pH, salinity, electric conductivity, total alkalinity, total hardness and concentration of different salts (sodium, potassium, calcium, magnesium, chloride and sulphate). No fish mortality was observed during the tolerance test up to 10 ppt salinity. The swimming movement of fish remained unaffected during first 8 days of tolerance test in all salinity levels, while fish became comparatively less active in 8 and 10 ppt treatments, after 8 days of exposure. However, no significant changes in food intake/appetite of fish were observed throughout the tolerance test. The present tolerance test reveals the possibility of rearing *C. carpio* in inland saline water.

**Keywords:** Common carp, Salinity tolerance, Survival, Appetite

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