

PREVALENCE OF *AEROMONAS HYDROPHILA* INFECTION ON CULTURING SEA BASS (*LATES CALCARIFER*) IN VALACHCHENNAI LAGOON, BATTICALOA

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Abstract

The floating cage cultured seabass (*Lates calcarifer*) at the site of Valaichchenai lagoon in Batticaloa District, East coast of Sri Lanka was reported acute mortality within short period of stocking the fish in the cage. Present study was focused to study the aetiology that caused by infection on culturing sea bass at the site. Gross pathological and histopathological examinations were carried in moribund and naïve fishes. Bacteriological, and mycological screening and antibiotic sensitive test for isolated bacteria were performed to find out the pathogen. Water and feed quality and their management were assessed at the time of mortality. Investigations primarily revealed that infection was initiated with the flooding due to heavy monsoonal season and sudden fluctuation in salinity. The gross pathological signs were change of skin colour, large irregular haemorrhages on the body surface, cloudy eye, ulcers on skin, lamellar fusion, fin rot and tail rot as well as histopathological findings such as necrosis in muscles, liver and kidney tissues, cyst formation by secondary infected pathogens proved that pathogen was bacteria. Gram staining also offered clear indication of gram negative rod shaped bacteria and, the particular pathogenic bacteria was confirmed as *Aeromonas hydrophila* through further analyses such as Oxidative test, Indol test, and antibiotic sensitivity test. Antibiotic sensitivity test also point out that the Tetracycline as one of the effective antibiotics for the *Aeromonas hydrophila* infection. The improper feeding management and sudden salinity fluctuation pave the path for acute infection of *A. hydrophila* and ultimately lead to the high mortality in cage culture.

Keywords: Aquaculture, Lagoon, Mortality, Necrosis, Pathogen