

Mass mortality of hatchery-produced larvae of Asian seabass, *Lates calcarifer* (Bloch), associated with viral nervous necrosis in Sabah, Malaysia

Abstract

Culture of Asian seabass, *Lates calcarifer* (Bloch) is a popular aquaculture activity in Malaysia. This fish is in high demand and fetches a good price in the local market. The seed for this fish is commercially produced by induced spawning in hatcheries. However, the seed supply is affected by frequent mass mortality of larvae aged between 15 and 60 dph. The clinical signs shown by the affected larvae include lethargy, loss of appetite, uncoordinated swimming, unusual spiral movement pattern and dark coloration. Histological examination of brain and eye of the affected specimens revealed extensive cell vacuolation in larvae aged 15–25 dph. Partial nucleotide sequence of the nervous necrosis virus coat protein gene of the affected larvae showed 94.0–96.1% homology to the nucleotide sequences of coat protein gene from nervous necrosis virus isolated from other countries in the Southeast Asia and Australia. This study provides scientific evidence based on molecular technique that many episodes of mass mortality in seabass larvae in Sabah is associated with the viral nervous necrosis. Because no effective treatment has been reported for this infection, stringent biosecurity measures must be adopted for exclusion of the pathogen from the culture system.