Isolation and identification of Pseudomonas fluorescens from hatchery-reared tilapia fry (Oreochromis niloticus Linnaeus)

Duremdez, Roselyn C.

Aquaculture Department, Southeast Asian Fisheries Development Center


http://hdl.handle.net/10862/2919
Isolation and Identification of *Pseudomonas fluorescens* from Hatchery-Reared Tilapia fry (*Oreochromis niloticus* Linnaeus)

R.C. Duremdez and G.D. Lio-Po

Bacterial infections caused by *Pseudomonas* sp. are widely reported among cultured aquatic organisms. In the Philippines, initial report of *Pseudomonas* sp. infections occurred among hatchery-reared tilapia fry, *Oreochromis niloticus* Linnaeus. Undue stress due to crowding and handling enhanced the development of the disease. The causative agent was identified as *Pseudomonas fluorescens*.

*Pseudomonas fluorescens* is a Gram-negative, rod-shaped bacterial species with flagellar filaments for active motility. It produces greenish to yellowish diffusable pigments on selective agar medium such as Pseudosel Agar. Growth and viability of this bacterium is maintained in optimum freshwater conditions for more than 150 days while viability in brackishwater situations is limited to 50 days only. Sea-water medium is not tolerated by this bacterium. This species is thus able to survive and thrive only in freshwater and brackishwater fish culture systems under optimum temperature (25°-30°C).

*Ps. fluorescens* has been frequently reported to occur predominantly in the tissues and internal organs of healthy and diseased freshwater fishes such as *Oreochromis niloticus*. The rearing water, likewise, contained predominantly the same genus of the bacteria.