Template Abstract (<300 words)

Addressing mortality of post-larvae in golda hatcheries of Sathkhira and Khulna region of Bangladesh

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Abstract

Shrimp is the second largest exportable commodity in Bangladesh and the giant freshwater prawn commonly known as Golda (*Macrobrachium rosenbergii*) is one of the most important commercially produced crustaceans in Bangladesh. Nevertheless, frequent outbreaks of microbial diseases, particularly caused by bacteria and/or viruses over the last few years challenged its prospect to flourish. Following a disease outbreak in prawn hatcheries of Sathkhira and Khulna regions during May 2012, samples were collected from dead prawn larvae, rearing water and fish feed in order to isolate and characterize the pathogenic bacteria. The bacterial count on animal samples was found significantly (p<0.05) higher than that of the water and fish

feed samples. The animals harbored heavy loads of pathogenic bacteria, and were identified as *Vibrio* spp and *Shigella* spp, based on the pathogens' morphological, biochemical and physiological characteristics. Twenty six antibiotics were tested to study the drug-resistance pattern of the isolates, and the analyses revealed that 100% of the isolated pathogens (36 tested) were resistant to Ceftazidime, Cephalexin, Ceftriaxone, Clindamycin, Imipenem, Kanamycin, Levofloxacin, Oxytetracycline, Oxacilin, Penicillin G and Vancomycin; whereas Ciprofloxacin, Chloramphenicol, Gentamycin and Cefotaxime showed sensitivity to 70% of the isolates, while the highest susceptibility (75%) was found against Doxycycline. None of the antibiotics however, was found effective as a sole drug to kill all the isolated pathogens.

Key words: Prawn, Disease, Antimicrobial resistance