

A survey on health status and diseases of shrimp hatcheries and farms in Khuzestan

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Abstracts:

WSSV has caused great losses to the global shrimp industry in recent years. In Iran high mortality occurred in shrimp farms of Abadan in 2002 than in Bushehr during summer of 2004 . Therefore to keep on this industry IFRO(Iranian Fisheries Research Organization) restored to introduce a new species named , *Litopenaeus vannamei* at first for investigative purposes . Inspection of *L.vannamei* for infectious agents , qualitative assessment of health management in the shrimp hatcheries and farms and assigning intensity and prevalence of infectious agents were the main objectives of this study , which was held in 3 years from 2006 to 2008. Therefore about 240 samples consisting of wild shrimps(*Exopalaemon styliferus* , *Metapenaeus affinis* and *Parapenaeus stylifera*) and crabs (*Grapsus* sp. And *Sesarma* sp.) were collected from Bahmanshir river in Abadan for virology studies by PCR procedure , as well as 65 individuals from *L.vannamei* brooders of hatcheries in Choebdeh (Abadan) to monitoring three viruses including WSSV, TSV and IHHNV . Also 530 postlarvae and immature shrimps of *L.vannamei* were tested for these triple agents using Iq2000 diagnostic kits and also for parasitic , fungal and bacterial infection . Besides histopathologic studies have been done on hepatopancreas and gills . Physicochemical parameters of water in culture ponds comprising of pH, DO , BOD , NO₃ , NO₂ , salinity , total hardness and NH₃ were measured all over of culture period for 520 times. Finally it has been detected 15 genus and species of bacteria consisting of *Vibrio alginolyticus* , *V.anguillarum* , *V.splendidus* , *V.vulnificus* , *V.proteolyticus* , *V.paraahaemolyticus* , *Plesiomonas shigelloides* and *Aeromonas hydrophila* ; 7 genus and species of fungi specially *Aspergillus niger* , *Asp.fumigatus* , *Asp.flavus* , *Fusarium* sp. And *Penicillium* sp. And two genus of parasites: *Vorticella* sp. And *Zoothamnium* sp. Were isolated .Crab(*Sesarma* sp.) were tested by Using Iq2000 diagnostic kit for WSSV , TSV and IHHNV and another diagnostic kit which was designed by IFRO for WSSV , that positive for WSSV. there was a positive result (Three viruses) for postlarvae and broodstock of *L.vannamei* by using Iq2000 kit. Histopathological studies have shown inclusion bodies of TSV, WSSV, IHHNV, MBV and HPV in various tissues . Physicochemical parameters of the water were measured as follows: salinity(12.3-22.5 ppt) , BOD (1.98- 10.21 ppm) , DO (3.17- 11.25 ppm) , NH₃ (0.02 – 3.45 ppm) , total hardness (3150 – 4160 ppm) and temperature (20- 31.5 c)

Key words : *L.vannamei*; Virus ; Bacteria ; Fungi ; Parasite ; physicochemical parameter of water