

Monitoring of infection agents in vannamei farms in choebdeh Abadan

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Abstract:

The introduction of *L. vannamei* to Iran from Hawaii was initiated when high mortality occurred in shrimp farms of Abadan in 2002 then in Bushehr during summer of 2004. Inspection of *L. vannamei* for infectious agents (Bacteria, virus, fungi and parasite), determine total plate count and total vibrio in Bahmanshir Rivers, shrimps and farms water, examination physicochemical factors of farms water, Identification of carriers of WSSV in wild shrimp and crabs, the main objectives of this study, which was held in 2007. 540 shrimp samples (pl12 – pl15) and subadults were collected from different shrimp farms in Khuzestan province and then check for identity bacteria, fungi and parasite. Also 280 samples of *L. vannamei*, wild shrimps (*Metapenaeus affinis*, *Exopalaemon styliferus*) and crabs (*Grapsus* sp. and *Sesarma* sp.) were collected from Bahmanshir river for virology studies by PCR procedure (Iq2000 kit WSSV, IHHNV, TSV). 120 Samples of *L. vannamei* for histopathology had been collected randomly and preserved in Davidson's fixation and then transferred to 75% ethyl alcohol for storage. (Hepatopancreas – gills) Physicochemical parameters of water in culture ponds comprising of pH, DO, BOD, NO₃, NO₂, salinity, total Hardness and NH₃ were measured all over culture period for 340 times. Finally it has been detected 10 genus and species of bacteria consisting of *V. alginolyticus*, *V. parahaemolyticus*, *V. proteolyticus*, *Plesiomonas shigelloides*; 6 genus and species of fungi specially *Aspergillus niger*, *Asp. fumigatus* and *Asp. flavus* and two genus of parasites vorticella sp. and Zoothamnium sp. were isolated. Crab (*Sesarma* sp.) were tested by using Iq2000 diagnostic kit for WSSV that positive for WSSV. There was a positive result (three viruses TSV, IHHNV and WSSV) for postlarvae and subadults of *L. vannamei* by using Iq2000 kit and IFRO kit (Internal kit). (Histopathological studies have shown inclusion bodies of TSV, WSSV, IHHNV, MBV and HPV in various tissues. Results demonstrated the mean of vibrio count (0.01×10^3 - 1.96×10^3) and total plate count (0.21×10^3 - 14.25×10^3). (physicochemical parameters of water were measured as follows: salinity (12.3 – 22.5 ppt), BOD₅ (1.98 – 10.21 ppm), DO (3.17 – 11.25 ppm), NH₃ (0.02 – 3.45 ppm) and temperature (20 – 31.5 °C).

Keywords: *L. vannamei*, bacteria, virus, fungi, parasite – Histopathology - physicochemical parameters of water- Abadan – Khuzestan province.