Abstract

Are Shrimp Hatcheries Progressive or Regressive: Is mature water a contradiction to disinfection

The operating philosophy of Modern Shrimp Hatchery management requires the disinfection of everything in order to produce disease free shrimp. However, in the application of disinfectants; bacterial diseases become prevalent and often result in very low post larval survivals. It is necessary to prevent the entry of viral and some fungal pathogens into the hatchery environment; but it is impossible and not desirable to prevent the entry and development of all bacterial populations. Disinfection of bacterial populations promotes the development of early stage fast multiplying pathogenic types of bacteria. Two practical approaches will be reported that can achieve both objectives of preventing the entry of viral and fungal pathogens; while maintaining beneficial bacterial populations that discourage the development of pathogenic bacterial populations. Recirculating water through bio filters eliminates the requirement to continuously add new disinfected water, while at the same time enriching the culture water with beneficial bacterial. Another approach is to develop a mature water starter culture, which can be used to inoculate any newly disinfected water that is added into larval tanks with high numbers of beneficial bacteria.