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Water quality and sediment conditions in white shrimp *Litopenaeus vannamei* (Boone) pond during the cultivation period in Iran

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Considering shrimp farming as a new and improving aquaculture practice in southern coastal parts of Iran, it faces some critical problems in terms of water quality that need to be monitored. The present study purposed to assess the water quality and sediment conditions in *L. vannamei* ponds during the shrimp farming in Teyab, Hormozgan, Iran. The results indicated that during the culturing period, mean values for temperature, salinity, pH and dissolved oxygen were not significantly different in three farms, whereas the levels for chlorophyll-a and total organic matter (TOM) showed the highest content onwards to the end of culturing period. The average total length or final weight showed no significant differences in three farms at the end of culturing period. Positive correlation was found between pH and water temperature, pH and dissolve oxygen (DO), pH and ammonia; Chl-*a* and DO; growth parameters and DO, and growth parameters and Chl-*a*. However, a negative correlation was observed between TOM and pH, TOM and water temperature, TOM and ammonia, Chl-*a* and water temperature, Chl-*a* and salinity, Chl-*a* and transparency; growth parameters and salinity, growth parameters and pH, growth parameters and ammonia. Dendrogram of temporal clustering showed that the water quality was relatively consistent during early culturing period and then represent an unstable condition from the second month towards end of culturing period. However, water quality parameters should be monitored to serve as guide for managing a pond so that conditions that can adversely affect the growth of prawns can be avoided.

Biography

Kiuomars Rohani-Ghadikolaei has completed his PhD from University Science Malaysia (USM), Malaysia. He is the Head of Aquaculture Department of Persian Gulf and Oman Sea Ecological Research Institute, Bandar Abbass, Iran. He has published more than three papers in reputed journals and has been serving as an Editorial Board Member of Iranian Fisheries research journals.

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