

A COMPARATIVE STUDY ON THE QUALITY OF POSTLARVAE OF BLACK TIGER SHRIMP, *Penaeus monodon*, PRODUCED IN SOME SRI LANKAN SHRIMP HATCHERIES WITH DIFFERENT MANAGEMENT SYSTEMS.

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Stocking of high quality post larvae in grow-out systems is regarded as one of the key factors that influence the quality of shrimp at harvest. Therefore, it is important to investigate whether there are differences in the quality of post larvae produced in hatcheries with different management systems. A survey was carried out and shrimp hatcheries situated in the North Western Province, Sri Lanka were categorized into 3 major types as hatcheries with a high level of management, medium level of management and low level of management, considering the facilities available and production procedures adopted in them. A less expensive scoring system was developed to assess the quality of post larvae using external appearance to the naked eye, behavioural patterns, length variation, appearance under the microscope, gut to muscle ratio, gut fullness, survival under stress tests and occurrence of certain disease symptoms. Nine shrimp hatcheries, three from each level of management were then selected, five random samples each containing more than three hundred post larvae (Pl₁₅ – Pl₁₈) were obtained from each hatchery and the quality of post larvae was assessed using the scoring system developed.

When mean total scores received from the scoring system were compared, it was found out that the quality of post larvae produced in the hatcheries with high and medium levels of management was significantly higher than that of post larvae produced in the hatcheries with low level of management ($P < 0.05$) while there was no significant difference between the quality of post larvae produced in the hatcheries with high and medium levels of management ($P > 0.05$).