

D-32: Risk of disease symptoms in shrimps cultured in high saline waters in Sri Lanka

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Majority of the Sri Lankan shrimp farms are located in the dry and semi-arid zones according to climatic classification and receive an annual precipitation of

less than 1900 mm. Thirty percent of these farms are situated in areas where the salinity of water source rise beyond 35ppt, during most parts of the year. Farms that depend on the northern part of the Dutch canal and Puttalam estuary are the worst affected. These farmers therefore carry out their culture cycles at high salinity levels (above 35ppt) which is considered not suitable for shrimp culture as the acceptable salinity range for culture of *Penaeus monodon* is between 15 and 30 ppt. The present study was undertaken to investigate the incidence of various disease symptoms that affected the cultured shrimps at salinity levels above 35ppt and study the relationship of these symptoms to salinity.

Results revealed that although retardation of growth was evident at high salinities, growth was not significantly different from that of prawns cultured at normal salinity conditions. ($p > 0.05$: $t = 2.845 \times 10^{-20}$). There was a significant difference in the occurrence of white spot disease which was low under high salinity conditions, ($p > 0.05$: $X^2 = 76.014$). Incidence of black gills also showed a positive correlation to salinity ($p > 0.05$: $r = 0.512$, $f = 73.57$). Mass mortalities were observed above 64 ppt salinity level. Other common symptoms observed were size disparity, tail rot, incidence of fouling organisms and ecto-parasites, and lesions and black spots on the shell. These symptoms however had no significant relationship to salinity.