INFLUENCE OF COOLING OF CRAB (*Scylla* spp.) JUVENILES ON THE PHYSIOLOGICAL CHANGES AND SURVIVAL DURING STORAGE

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ABSTRACT

Considering that aquaculture of mud crabs is still dependent on wild seeds, mortalities associated with capture, handling and storage aggravates the problem of lack of seeds which is one of the major constraints affecting the development of the mud crab aquaculture industry. Having cold rooms for maintaining optimum environment for storage has been recommended, however these facilities are not available in all levels of the industry and can only be found in some of the major traders. To address this issue, this study tested a handling and storage scheme that can be used at various points along the harvest to market chain. In lieu of cooling crabs in a chamber, crabs were directly immersed in seawater of different temperatures (4°C, 7°C, 15°C and 29°C) and stored for 48h, 72h and 96h. Crabs that were cooled at 15°C for 3 min showed highest survival (88-90%) after 48h, 72h and 96h of storage. In addition, the least accumulation of glucose and lactic acid in the haemolymph was detected in crabs cooled at 15°C regardless of the storage period, which suggests that crabs were less stressed when cooled at this temperature.

Keywords: mud crab, *Scylla* spp., handling, storage, mortality, stress, glucose level, lactic acid level