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Sustainable Aquaculture for a Secure Future

Title: Dynamic of Stress Response in Victoria Labeo (*Labeo victorinus*) during transfer from the Hatchery to cages and Ponds under Differential Caged Stocking Densities

Author(s): Gladys M. Kuria¹, Charles C. Ngugi², Elijah Oyoo-Okoth³

1. Department of Fisheries and Aquatic Sciences, Moi University, P.O. Box 1125, Eldoret, Kenya

2. Ministry of Fisheries Development, P.O. Box 58187-00200 Nairobi, Kenya

3. School of Natural Resources and Environmental Studies, Karatina University, P.O. Box 1957-10101, Karatina, Kenya

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Abstract: Variation in fish stocking densities translate to difference in growth performance, yields and economic benefits in fish culture. Transferring fish directly from hatcheries to the cages or ponds may induce stress. We evaluated the stress response of Labeo Victoria (*Labeo victorinus*) in an integrated cage-cum-pond culture during transfer of fish from the hatchery to the cages and ponds at different cage stocking densities. Cages were stocked at varying densities of 10, 30, 60, 90, 120, 150 and 180 fish/m³ and suspended in a static pond of 200 m². The *L. victorinus* fingerlings of a mean weight 23.6 ± 1.8 g were stocked in the cages and the pond respectively. 20 fish were sampled during the transfer period from the hatchery to ponds and cages for analysis of primary and secondary parameters of stress response. Primary stress response occurred when fish were directly transferred to cages and ponds at stocking density ≥ 60 fish/m³ and 90 fish/m³ respectively. Parameters of secondary stress response occurred in fish transferred to the cages at stocking density ≥ 120 fish/m³ and in ponds at density ≥ 150 fish/m³. Transfer of fish directly from the hatchery to the ponds induce primary and secondary stress.

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