Management of Asian Seabass *Lates calcarifer* (Bloch) brood stock in net cages in the Negombo lagoon

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Asian seabass, *Lates calcarifer* (Bloch), is gaining rapid popularity as a candidate species for diversification of coastal aquaculture in Sri Lanka and its potential for farming will be increased after the successful induced breeding. Therefore, concerted efforts over the last decades have developed hatchery techniques for commercial seed production in Sri Lanka. A 23 month cage culture was conducted with *Lates calcarifer* so as to maintain broodstock for the use of development of the breeding technology in Sri Lanka. Certain bio-physico-chemical parameters of the estuarine ecosystem which influence cage culture of seabass are summarized.

Fish grew from initial weight of 1,190.34±189.33 g and initial length of 44.7±2.72 cm to a final weight of 4,485.00±832.84 g and 73.4±4.39 cm respectively. Growth rate was 4.85 g/day with 98% survival over a period of 23 months.

Critical water quality parameters such as surface and bottom water salinity ranged from 0 to 30 ppt and 4 to 35 ppt with an average value of 20.64±9.59 and 24.48±8.88 ppt respectively. Surface and bottom salinities followed a similar pattern. dissolved oxygen ranged from 4.4 to 8.3 mg/l, while biological oxygen demand varied from 0.4 to 4 mg/l. The water pH level was 6.1 to 9.1, suspended matter varied from 2.7 to 423 mg/l and a higher chlorophyll level was observed during the period September to December 2011 and varied from 0.05 to 19.34 mg/m^3. A relatively higher amount of nitrate-N were recorded during the southwest monsoon (October – November 2011) due to nutrient rich urban and rain water runoff to the lagoon.

At the end of the culture period, the fish had attained a body weight of 3.4 to 6.25 kg and were ready for induced breeding.

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