

## **Unforeseen problems experienced in experimental cage culture: lessons for future cage culture**

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Growth performance of Genetically Improved Farmed Tilapia at three different stocking densities (50, 75 and 100 fish m<sup>-3</sup>) in triplicates were evaluated in a cage culture unit of nine cages established in a perennial reservoir in Hambantota District. Nylon material having mesh size of 10 mm recommended for cage culture was used. Fingerlings (6750) were stocked in nine cages, fed with a formulated diet according to the body weight using feeding trays. Monthly samples from each cage were weighed and the study conducted for four months. In all cages, monthly mean weight increase was very low. Cages with low stocking density had the highest weight gain while high density had the lowest. Specific growth rate (SGR) in fish of all nine cages increased in the first month and then gradually decreased during subsequent months. Wild fish (*Puntius dorsalis*, *P. singhala*, *Rasbora daniconius*, *Devario malabaricus*, *Glossogobius sp.*, *Esomus sp.*) entered into cages in large numbers had contributed to decrease in SGR. Highest weight of the wild fish was recorded in the second month and reduced in subsequent months due to regular inspection. Effective increase in SGR however was not observed. In two cages having 100 and 75 fish m<sup>-3</sup> showed an increase in SGR in last two months which was not observed in other cages. This effect relates with the changing of the water current in the reservoir into opposite direction resulting water entering firstly into these two cages making a rapid increase in fish weight. Awareness of changing water current patterns in the reservoir and positioning the cages accordingly is an important issue to be considered in commercial cage culture. Use of 5mm mesh size is recommended to avoid wild fish invading the cages and has proven a good harvest.

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