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Post Box No. 1603, Cochin - 682 018
www.cmfri.org.in**



Growth and production of vertically and horizontally suspended mussel ropes in estuarine culture

P. Laxmilatha and M. P. Sivadasan

Calicut Research Centre, CMFRI, Calicut

An experiment to compare the growth and production of vertically and horizontally suspended mussel ropes was conducted in the CMFRI Demonstration cum Research Farm in Chaliyar Estuary, Karuvanthiruthy, Kozhikode. Approximately 13.5 m of vertically suspended and 24 m of horizontal ropes were set in the farm in January 2005. The growth in terms of length and weight was monitored at monthly intervals. The mussels were harvested on 25.5.05 after 106 days.

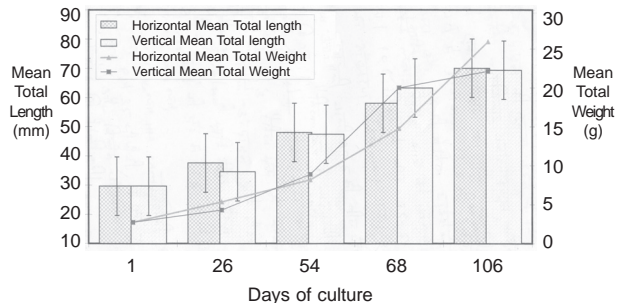


Fig 1. Growth of vertically and horizontally grown mussels: Karuvanthiruthy, Chaliyar estuary 2005

A total harvest of 587.7 kg shell-on mussels were obtained of which 249 kg was from vertical and 339 kg from horizontally suspended ropes. The production per meter rope was 18.4 kg and 14.1 kg in case of vertically and horizontal suspended ropes respectively. The average production per metre of rope was 15.7 kg at the rate of 38 numbers per kg. The meat constituted 34% of the total weight.

The hydrological conditions at the farm site were: salinity 28 to 35 ppt, pH 7.3 to 7.5, transparency 40 to 130 cm and dissolved oxygen 2.2 to 4.6 ml/l.

The horizontally suspended mussels registered marginally better growth (Fig. 1) and production compared to vertically suspended mussels. However, statistical analyses showed that there was no significant difference in growth and production between vertically and horizontally seeded ropes. Nevertheless, from the above study it is clear that, in a large scale commercial production system, horizontally suspended culture system in estuaries will yield higher production and economic benefit.