

B-58: Feasibility studies on the culture of the hybrid sturgeon fish (*Huso huso x Acipenser ruthenus*) in Sri Lanka

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A hybrid of Beluga (*Huso huso*) and Sterlet (*Acipenser ruthenus*) has been identified as a potential candidate for culture in tropical climates. The processed flesh is a delicacy and has a growing international market.

The growth rates of cultured sturgeons are extremely low for a period of about 9 months per year due to relatively low environmental temperature in the Volgograd region, Russia. There is a possibility of accelerating the growth rate and minimizing the culture period by growing them under tropical climatic conditions.

The present study was initiated to investigate the possibility of culturing sturgeon (fingerlings to marketable size) in Sri Lanka as a collaborative programme with the Ministry of Fisheries, Russian Federation. This paper presents the initial experimental results.

The yolk-sac stage larvae were imported from Volgograd Sturgeon Propagation Plant. Development of yolk-sac stage larvae was studied under different temperature conditions.

Growth trials were conducted at Uda Walawe Fisheries Station for a period of 10 weeks with different temperature and different formulated diets.

The larvae reared in the temperature range 19-22°C had a survival of 80 %. Very high mortality rates were observed in rearing tank where the larvae were subjected to temperatures over 22°C. Experiments conducted

introducing 7 days old larvae (0.25g) to mud pond showed very high mortalities.

Fingerlings reared in the temperature range of 19-22°C showed a mean daily growth increment of 0.715 g while larvae reared in the temperature range 27-30°C showed a mean daily growth increment of 0.733 g.

At the end of the experimental period of 63 days, sturgeons reached a mean total length of 23.70 cm and weight of 59 g. at low temperatures.

The final mean length and mean weight were 26.35 cm and 63.05 g respectively at higher temperatures.

Larvae fed with formulated diet formula 2 grew faster and showed a mean daily growth rate of 0.113 g while larvae fed with formulated diet formula 1 grew slower and the mean daily growth rate was 0.088 g.

For successful rearing of yolk-sac larvae, temperatures below 22°C were found suitable.

The hybrid (*Huso huso x Acipenser ruthenus*) appears to show an acceptable growth rate under climate conditions in the dry zone of Sri Lanka. However improvements are necessary in management procedures to increase the survival rates before establishment of commercial scale culture.