

Seed production and hatchery management of Golden mahseer (*Tor putitora*)



Development of captive breeding technology for the golden mahseer helps provide seed for stocking natural and man-made water bodies, thus promising supplies of the fish for food and sport while assuring the conservation of this magnificent fish.



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*G*olden mahseer (*Tor putitora*) are large cyprinids, inhabiting the clear, pristine and fast flowing waters of Asia, from the cool waters of Himalayan streams to the tropical rivers of South East Asian jungles. They are highly sought after fish, valued for their excellent taste, ornamental beauty and fighting skills. Mahseer, the big-scaled carp attracts the anglers as well as naturalists from all over the world. Mahseer in the Indian sub-continent described as the 'King of Indian Aquatic Systems' encounters in the Tor zone (600 -1200 m) of the glacier-fed Himalayan Rivers with much more extended distribution to the lower reaches in the peninsular Indian rivers.

Tor putitora is well acknowledged, highly valued indigenous fish of the Himalayan belt. Almost 20 different species of tor have been reported from many rivers, streams and lakes of all along the mid Himalayan belt, Assam, Jammu & Kashmir, Sikkim as broadly Afghanistan, Bangladesh, China, Myanmar, Thailand, Nepal, Pakistan, Vietnam, Indonesia and Malaysia. Mahseer hatcheries in different parts of India have been developed.



Distribution

All along the Himalaya, NE India, J&K, Sikkim
Afghanistan, Bangladesh, China, Myanmar,
Nepal and Pakistan

Breeding period

May – August

Inherent constraint in natural breeding

- Extremely low fecundity
- Eggs demersal - can sink in mud and perish
- Hatching period is too long - 80 to 90 hrs
- Hatchling to free swimming stage - 10 days.
- From egg to free swimming stage for 15 days they are highly vulnerable to all kinds of predators

Hatchery Pre-requisite

Water flow

1 L/m	Incubation & rearing 2000eggs at 20-28°C.
3-4 L/m	Rearing 2000 fry (0-3 months) at 20-27°C
4-6 L/m	Rearing 1500 fingerlings (4-9months old)

Flow through hatchery

Over head tank	1000 L installed at a height of 5 m above
Hatchery tanks	galvanized iron sheets or fiber glass of 200x60x30cm of size
Hatching trays	50x30x10 cm with synthetic netting cloth of 1mm mesh size. 5000-6000 eggs can be stocked



Egg and larval development

Colour	Lemon yellow/ Brownish golden
Fertilisation	90-99%
Hatching	80-96 hrs at 22-24°C
Hatching	80-85%



Food and Feeding habit

Omnivorous (Feeds on algae, insect larvae etc.)

Prefer carnivorous feed during juvenile and herbivorous during adult stages.

Maturity

Male 2+yr

Female 3+yr



Fecundity

3375-8944 nos. ova/kg body weight

The population of Golden Mahaseer was abundant in the most of the himalayan rivers, however the population have been decliming in recent times due to various natural and anthropogenic factors. Therefore the conservation of this fish is very important through ex-situ and in-situ conservation approaches.

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