

ICAR CIFE achieved a breakthrough in captive broodstock development, induced breeding and larval rearing of Olive Barb, *Puntius sarana*

ICAR-Central Institute of Fisheries Education (CIFE), Mumbai has developed the compressive package of captive seed production of a Small Indigenous Fish Species (SIFS), olive barb, *Puntius sarana*. The technology comprises of captive broodstock development, induced breeding and indoor larval rearing.

In captivity, olive barb attained sexual maturity at the average age of one year with the weight ranging from 14 to 18 g. Sexual maturity of males and females in captivity were noticed during May to August, whereas peak spawning recorded in July. During the first week of July 2026, the female fish (average body weight, 16 g) having the mean oocyte diameter of 1050 ± 5.70 and oozing males (average body weight, 15 g) were selected and maintained in sex ratio of 2:1 (Male: Female). The brooders were administered with standard dose of inducing hormone (100 μ l to female and 50 μ l to male). Fish spawned after latency period of 12 to 14 h. The estimated absolute functional fecundity of a female was ranged from 2500 to 3200. Fertilized eggs of olive barb were transparent and sticky in nature. The larvae hatched out after the incubation period of 16 h at 28 °C water temperature. The newly hatched larvae measured from 2.50 to 2.70 mm with large oval-shaped yolk sac devoid of oil globules. For larval rearing, the newly hatched larvae were carefully transferred to larval rearing tanks (250 L) and reared for a month. Four days post hatching (dph) larvae are characterized by absence of yolk sac, opened mouth and anal pore. During larval rearing, larvae were initially fed with *Daphnia*, which continued for 30 days. Weaning on a micro-particulate diet (500 micron) was started from 25 dph. Fry produced from larval rearing were reared in nursery rearing tanks (500 L) for 60 day. It was observed that the female fish can produce around 150-250 fry. The technology of captive breeding and seed production was developed by a team of scientists Dr. Prem Kumar, Dr. K.N. Mohanta and Dr. S. Munilkumar, under innovative project of Pradhan Mantri Matsya Sampada Yojna (PMSSY) funded by National Fisheries Development Board (NFDB).



Captive broodstock of olive barb, *Puntius sarana*



45 days old fry of olive barb, *Puntius sarana*



90 days old fingerlings of olive barb, *Puntius sarana*