



# Pearlspot Seed Advisory

## How to develop healthy pearlspot broodstock?

- Quarantined pathogen free healthy broodstock should be used in captive breeding for producing high quality fry and avoiding vertical transmission of diseases.
- Good quality broodstock feed *EtroBrood<sup>plus</sup>* formulated by ICAR-CIBA for high quality broodstock and seed.
- Broodstock of pearlspot should be handled gently preferably with a soft cloth net to avoid injury and fungal infections.
- For avoiding parasites, prophylactic treatment can be done with suitable agents.

## How to increase the spawning frequency in pearlspot?

- Pearlspot is unique as it exhibits parental care. Fecundity of pearlspot is low, lays 800-2000, eggs size 2.0 mm. Eggs are oblong, heavily yolked, adhesive and takes three days



Pearlspot broodstock for captive seed production



Eggs of pearlspot are initially light and get progressively brown in colour

for hatching. Initially eggs are light peach and changes progressively to brown color. These differences in colouration helps to assess the days post hatching.

- Egg caring by the parent fishes ensures a good hatching rate through continuous fanning and clearing by parent fish. If the eggs are separated from the parents, it is desirable to give a continuous flow of filtered water of the same salinity and provide a steady aeration in the proximity of the substrate where eggs are attached.
- Fertilised eggs are very susceptible to fungal infections in the absence of parental care. It is desirable to give an anti-fungal treatment to eggs to prevent infections and optimise hatching rates.
- A healthy batch of pearlspot eggs will not be having any evident white discoloration indicative of fungal infections.

## How to assess healthy pearlspot larvae?

### Wriggler phase-

- Newly hatched pearlspot larvae measure approximately 5.5 mm. The larvae have large yolk sac measuring over 2 mm. A good larval size and yolk content is an index of healthy larvae and ensures good larval survival rates.





Free swimming larvae of pearlspot

- The larvae are demersal and appear as clusters at the bottom of the rearing container. The larvae show wriggling behaviour when disturbed. This is a non-feeding stage where larvae subsist on endogenous yolk. A healthy batch of larvae at this stage can be identified by their clustering behaviour.

### Free swimming larvae

- By 3 days post hatch (TL- 6mm), yolk sac is partially utilized and the mouth opening is visible. Pectoral fin is well formed and the larvae initiate swimming at this stage. By day 4 most of the larvae develop the capacity to swim in a shoal



Free swimming larvae of pearlspot

and feed organisms can be observed in the gut indicative of active exogenous feeding. This is a sign of healthy larvae in the initial stages. Scattered larvae or floating larvae are indicators of poor health of the batch of pearlspot larvae.

- Gentle siphoning using aeration tubes is advisable for handling or transfer of larvae without injuries.

### Fry

- Pearlspot attain fry stage after 40-45 days of rearing and resemble adults. Healthy fry will remain as a single shoal

and will be seen swimming actively. Sudden changes in larval swimming and shoaling behaviour, reluctance to accept feed, changes in appearance of larvae with respect to colour or fin erosions are indicative of poor health of larvae.

- Handling of fry stages maybe done gently using soft cloth nets to avoid abrasions and consequent fungal infections.

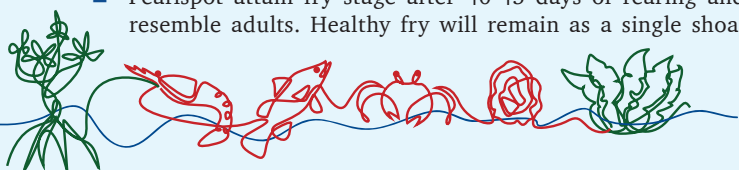
- Set up modular breeding unit
- Curtail parental care to enhance breeding frequency
- Active shoaling fry indicate quality seed
- Use formulated feed and periphyton substrate for higher fry growth rate

### Fingerlings

- Pearlspot exhibit slow growth rates. Pearlspot fry reared in tank systems was found to attain average body weight 6-10 g after 2-2.5 months. Using quality feed and periphyton substrates during nursery rearing can enhance growth of pearlspot.
- Growing pearlspot to larger sizes for stocking in grow-out culture systems is desirable to reduce the culture duration. Healthy seeds of this size will be uniform in size and colour and also without any apparent fin erosions or discolorations.
- At ICAR-CIBA, pearlspot fry, TL, 20 mm are transported in oxygen packing 200 numbers in 5 litres for 24 hours. With increase in fry size or transport duration, the density is reduced accordingly



Pearlspot Juveniles



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