SEABASS SEED ADVISORY

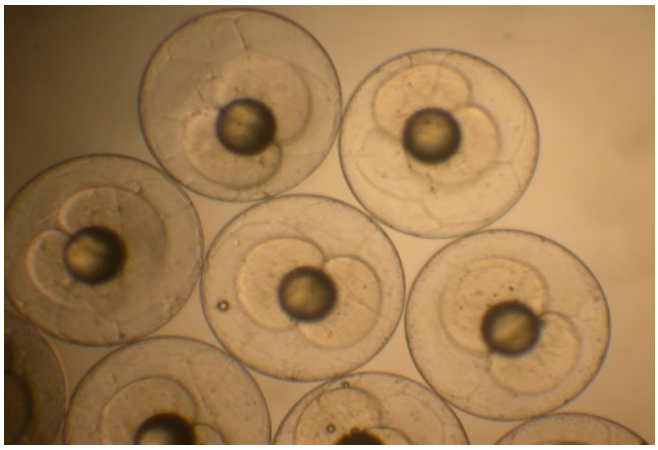
How to maintain healthy broodstock?

- Seabass is a protandrous hermaphrodite, early mature as males (2.0-3.0kg) and become females (>4.0 kg). Important to maintain two size groups to have adequate broodstock fishes in the hatchery
- Pathogen free broodstock to be strictly used. Viral Nervous Necrosis is the most prevailing disease in this fish. Subjecting broodsfishes through quarantine procedures is mandatory to have VNN free broodstock after adequate prophylactic treatment.
- RAS based broodstock maintenance is advisable to have better control over water quality and health management

Seabass brooders in RAS tank

Criteria to select high quality spawn

- Fertilized eggs/spawn can be obtained after administration appropriate hormone. Spawn are transparent, by over flow method through egg collection net.
- Unfertilized eggs are opaque, sink at the bottom of the spawning tanks, which can be drained out properly to avoid the contamination. Eggs can be subjected to idophore treatment before transferring to hatching tank.



Fertilized eggs of seabass

- Fecundity of seabass is high ranging from 2 and 10 million eggs. It is a batch spawner and optimal sized female may be selected based on the capacity of the hatchery.
- Size of fertilized eggs are one of the quality indicator from 760 to 790 μm. Fertilization over 80% is good indicator and below 50%, it for efficient larval rearing.


Seabass fry

- Latency period 30-36 h and incubation period 17-18 h is an indicator of normal spawning. Stocking @ 500 eggs/litre is advisable during hatching. Unfertilized eggs in the incubation tanks should be removed at the earliest.

Protocols to produce healthy larvae

- Normal hatchlings measure 1.60-1.75 mm. Yolk and oil globules act as nutrient reserve until first feeding and determines larval survival
- Larvae are photo-tactic collected by gently scooping using small container for easy transfer into rearing tanks. Ensure the larvae had no deformities and have normal swimming behaviour.
- Seabass larvae cannibalistic. To avoid the differential growth and shooter development, regular grading at 3-4 days interval to be done from 18th day post hatch. Care should be taken that they are not injured while handling.

- Pathogen free broodstock
- RAS based rearing
- Healthy & uniform size seed
- Safe handling and transportation
- 3 tier farming system

- Artificial feeding can be initiated by 17dph by co-feeding with *Artemia* nauplii and complete weaning done 25-30 dph.
- By 18-25 days, larvae metamorphose in to fry. By 30-35 days, the fry is ready for nursery rearing

How to produce quality seabass fry?

- 30 days old fry (1.5 cm) stocked in the nursery tanks @ 500 no/m2 attains around 7.5 cm in 60 days culture with 65-75% survival rate. Grading @ 3-4 days done to remove shooters and to maintain uniform size seed for better survival rate.
- Hapa based nursery rearing (2x1x1 m) mesh size 1.5-2 mm used. It is a skill based activity where labour is required during grading and conducted as a group for easy operation
- The seed has to be screened for checking the VNN at all stages to ensure the production of pathogen free seed
- Transportation of fry (1.5 cm) @ 350-500/5 L is done in polythene bag for 24 hr travel in 26-28°C water temperature after placing in cardboard boxes.

Methods for fingerling production

- Transportation of large sized seed to culture site is expensive. To avoid these problems,, nursery rearing can be done at the site very close to pre-grow out culture sites
- Seabass fingerlings need to be acclimitised to any salinity ranged 0-35 ppt in a gradual manner.
- Pre-growout culture maybe done in small volume cages (mesh 8-12 mm). Stocking can be done @ 300/m3. Feeding done with artificial feeds @ 2-3 times daily. Grading done once a week. It helps to get a survival up to 80% in 90 days rearing and attaining body weight 60-80g
- Fingerlings handling should be careful, since they are very sensitive and easily can be injured. Fingerlings transported in the open tanks with oxygen bubbling for grow out culture.


Farmer with harvested seabass

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