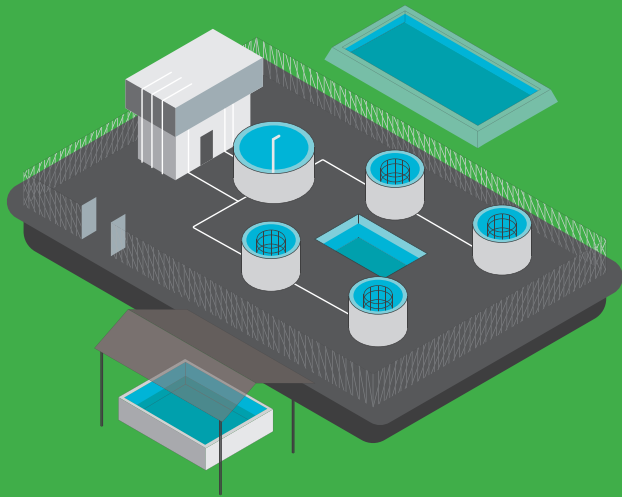


Dos & Don'ts: Hatchery

IMC Hatchery: Adequate supply and use of quality seed is one of the important prerequisites for enhancing fish production and sustaining sector growth. To produce quality seed and maintain its sustainability Dos and Don'ts in carp hatcheries are listed below.



Hatchery Unit

Brood Stock Sourcing & Raising

Do's

- ✓ Use brood stock from known source and genetic makeup.
- ✓ Brood stock ponds must have adequate water depth (min 2 m).
- ✓ Prepare Brood stock ponds as per the recommended SOP.
- ✓ Select healthy breeders of 2+ years of age with a minimum body weight of 1.5 kg
- ✓ Stock brood fish at recommended rate.
- ✓ Rear brood stock as per SOP & separate them species wise and Sex-wise in different ponds.
- ✓ Partial replacement of brood fish (at least 30% of total stock)

Don'ts

- ✗ Don't use Brood stock of unknown source and genetic makeup.
- ✗ Don't select any injured, abnormal or deformed brood fish.
- ✗ Don't use under aged, over aged or under sized brood.
- ✗ Don't over stock or under stock brood.
- ✗ Don't over-feed or under-feed the brood fishes.
- ✗ Don't use expired/stale feed.
- ✗ Don't use off springs of the same parents as future brood stock

Induced Breeding Practices

Do's

- ✓ Select only healthy breeders of almost equal size and same age.
- ✓ Maintain sex ratio (1:1 male: female by weight and 2:1 male: female by numbers).
- ✓ Segregate breeders sex wise and keep them in separate tanks/hapas for easy handling while injecting hormone.
- ✓ Inject fish in during late evening hours.
- ✓ Cover Spawning pool with net covering.
- ✓ Maintain continuous water circulation at appropriate speed in spawning and hatching pool.
- ✓ Disinfect breeders with KMnO4 solution before releasing to spent fish ponds.

Don'ts

- ✗ Don't use under sized or under aged brood fishes.
- ✗ Don't use over aged (> 5 years) and overweight fish (> 5 kg).
- ✗ Don't use injured and deformed fishes.
- ✗ Don't use over doses/underdoes of inducing agents.
- ✗ Don't practice mixed species (males and species of different species) breeding simultaneously.



Managing Inbreeding Rate

Do's

- ✓ Increase effective population size by using min 100 sets for replenishing as future brood stock.
- ✓ While selecting future brood stock select randomly from each spawning batch, pool them for raising future brood stock.
- ✓ Replenish with new breeders every year (20%) and cull out same number.

Don'ts

- ✗ Don't select the left out fingerlings for raising brood stock as these may be from slow growing parents.

Egg Selection

Do's

- ✓ Collect water hardened eggs in the early morning hours.

Don'ts

- ✗ Don't allow the eggs to settle at the bottom of hatching pools.
- ✗ Don't delay transfer of water hardened eggs.
- ✗ Don't use turbid water in the hatching pool.

Egg Hatching/ Incubation

Do's

- ✓ Stock into the hatching pools at proper stocking density in morning hours.
- ✓ Cover hatchery with close mesh net.
- ✓ Maintain Water temperature around 27-30°C.
- ✓ Remove dead eggs/hatchlings at frequent intervals.
- ✓ Maintain water circulation at proper speed throughout hatching period.

Don'ts

- ✗ Don't allow dead eggs, hatchlings and any other material to decompose in the hatchery

Spawn Collection

Do's

- ✓ Shift spawn only after complete resorption of yolk sac.
- ✓ Count the spawn before shifting.
- ✓ Spawn should be conditioned in a small tank with water flow.
- ✓ Spawn should be ideally transported in cool hours- morning or evening only.

Don'ts

- ✗ Should not make delay in egg collection and transferring to hatching pools.

- ✗ Avoid rough handling of eggs.
- ✗ Don't collect spawn until yolk sac is fully resorbed.
- ✗ Avoid peak sunny hours for collection to reduce mortality.

Spawn Nursing

Do's

- ✓ Stock spawn to well-prepared nursery ponds with sufficient zooplankton in morning hours.
- ✓ Cover the nursery ponds with nets to avoid bird picking/predation.
- ✓ Provide only powdered feed for first week by broadcasting.
- ✓ Monitor Growth and health status by sample netting.

Don'ts

- ✗ Avoid stocking of spawn during mid-day.
- ✗ Don't stock spawn more than the recommended stocking density.
- ✗ Don't over-feed or under-feed the spawn and with oversized feed.
- ✗ Don't use stale/ old feed.