

# Harvesting post-larvae

The time taken to complete metamorphosis depends mainly on water temperature and salinity. Given proper management of both, as well as of the supply of feed, it takes 35-40 days for metamorphosis into post-larvae to be completed. Post-larvae look like small prawn and move forward. Instead of swimming in the water, they crawl along the wall or bottom of the tank.

Post-larvae harvesting can begin when about half the larvae have metamorphosed. The following procedure may be used:

1. Turn off aeration.
2. Cover half the rearing tank. Larvae will be attracted to the light; PL will go to the dark side. PL's will settle to the bottom and on the sides of the tank, while larvae remain swimming.
3. After 10-15 minutes, lift up the cover and scoop net the PLs. Transfer the harvested PLs to a 30-litre basin. Since some larvae will also be caught, they should be separated from the PL and returned to the rearing tank. Gently stir the water to create a circular current in the basin. Larvae will concentrate in the centre of the basin and can be easily netted and returned to the rearing tank.
4. After the larvae have been returned to the rearing tanks, the PLs, in the buckets or basins can be counted. The PLs are mixed with a rapid up and down motion of the hand or a plunger, followed by quickly sampling the container with a 250 ml glass beaker. At least three repeat counts should be made; there should not be wide discrepancies between each count.

## Acclimatization of post-larvae to freshwater

Post-larvae in 12 ppt saline water may suffer high mortality if stocked immediately in freshwater. Therefore, they should be acclimatized in freshwater before they are transferred to post-larvae holding tanks or sold.

After the post-larvae have been transferred, the basin water should be reduced by about 50 per cent and freshwater gradually mixed with it through a porous hose. In this way, the water level of the basin can be brought up to full in about three hours and the salinity brought down to 6 ppt.

Six hours later, 50 per cent of the water should again be removed and freshwater mixed to raise the water level as before, now bringing down the salinity to 3 ppt. After 2-3 hours more, two-thirds of the water should be siphoned from the basin and refilled with freshwater. The salinity will now be about 1 ppt. After keeping the post-larvae in this water for 2-3 hours, they should be transferred to post-larvae holding tanks. This acclimatization should be done over at least 12 hours.

Another way to reduce salinity is by continuous flushing through the screened stand pipe. The freshwater inflow can be adjusted to bring the salinity down to 0 ppt in 12 hours. **But BEWARE** : Deep well water may be toxic and should be tested by bioassay before the flushing method is used.

## Nursing post-larvae

Tanks of 10- 50 m<sup>2</sup> and 1.2 m depth are suitable for post-larvae rearing. However, PLs should be sold as quickly as possible. Mortality increases rapidly after only a few days in crowded holding tanks.

Half the water in post-larvae holding tanks should be changed daily. These tanks require continuous aeration and should be shaded, either with individual covers or a roof over the tanks. The bottom of the tank should be cleaned of excreta and leftover feed every morning by siphoning. Five thousand PL/m<sup>2</sup> may be held for one week. PL density should be reduced to 2000/m<sup>2</sup> if they are being held for longer periods. The holding capacity of the PL tanks can be increased by placing additional substrate. Palm fronds and branches may be used. Vertical panels of plastic mosquito mesh are easy to clean and long lasting.

*Artemia* nauplii are not necessary for post-larvae. Good quality pellets, ground fish and blended bivalve meat may be fed.

PL may also be nursed in *happas* (mesh bags) suspended in ponds whose water-quality is good. Floating net cages in lakes or slow-moving streams may also be used. The *happas* have to be frequently cleaned. Care should be exercised in controlling the stocking rates. If the PL are held for any length of time, thinning may be required.