

INDUCED MATURATION OF PENAEID PRAWNS FOR HATCHERY OPERATIONS

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For successful hatchery production of penaeid prawn seed a steady supply of spawners of desired species of prawns is a necessary prerequisite. As the collection of spawners from the sea is a costly and uncertain operation, efforts have been made to induce the captive broodstock to mature under controlled conditions. The most successful technique in inducing maturation in captivity has been the removal of one of the eyestalk which are known to be the site of production and storage of gonad inhibiting hormones. At the NPCL commercially important species of marine penaeid prawns have been induced to mature and spawn by using the technique of unilateral eyestalk ablation.

Adult *P. indicus* (over 140 mm in TL, 30 mm CL) were collected from the grow-out ponds of the NPCL and kept in 0.3 tonne plastic pools containing filtered sea water of salinity 33 ± 2 ppt. After 24 hours of acclimatization the females are selected and one eyestalk of each is removed

by electro-cauterisation. The ablated females were kept along with half that number of unablated males in 10 tonne, circular plastic lined pools in which the seawater is made to circulate through a sub-gravel filter by air-lifts. The pools were accommodated in an open shed with tiled roof. The prawns were fed *ad libitum* with fresh clam meat. The entire process is carried out in ambient temperature of $28 \pm 2^\circ\text{C}$ the salinity of water is maintained at 32 ± 2 ppt and the pH at 8 to 8.2.

The prawns matured within 3 to 5 days after eyestalk ablation and 70% of them spawned successfully. The eggs hatched into healthy nauplii which were further reared upto the juvenile stage.

The size of the prawn chosen for eyestalk ablation seems to have considerable effect on the process of maturation. Quality of sea water also seems to be of prime importance in the maturation of these prawns. O