Southeast Asian Fisheries Development Center **Aquaculture Department**

SEAFDEC/AQD Institutional Repository **http://repository.seafdec.org.ph**

Journals/Magazines Aqua Farm News

1994

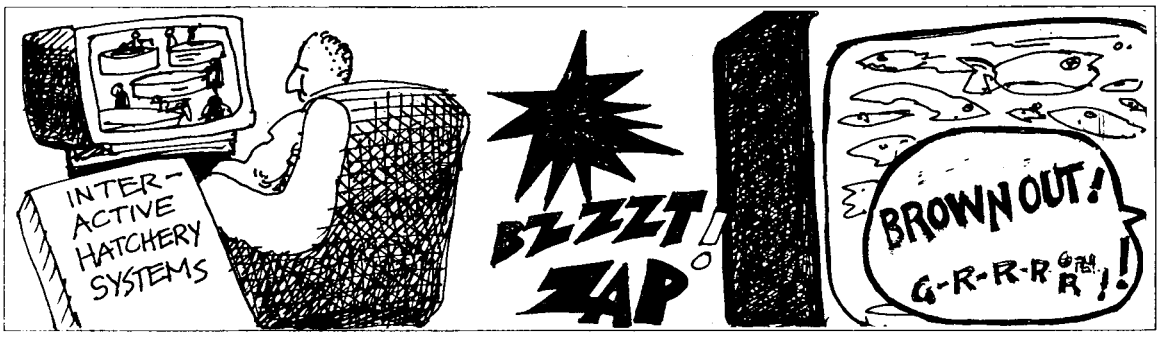
Hazards in the hatchery

Aquaculture Department, Southeast Asian Fisheries Development Center

Southeast Asian Fisheries Development Center, Aquaculture Department (1994). Hazards in the hatchery. Aqua Farm News, 12(4), 8.

http://hdl.handle.net/10862/2520

Downloaded from https://repository.seafdec.org.ph, SEAFDEC/AQD's Institutional Repository



HATCHERY MANAGEMENT

Hazards in the hatchery

Hazards in hatchery operations include unfavorable environmental conditions, mechanical failures or power breakdowns, and human negligence. These can result to death of stock.

Environmental factors

Successful results in hatchery operations can be obtained by maintaining optimum water quality -- salinity, dissolved oxygen, and temperature. Constant aeration will not only provide enough oxygen but also check the cultures from oxygen, carbon dioxide, and ammonia building to lethal levels. While *Chlorella* is reported to keep the ammonia levels under check, excessive algal blooms cause serious oxygen problems during late night hours. Bear in mind that larvae are very sensitive to fluctuations in oxygen and temperature. Keeping the culture water clear and hygienic by regular exchange of clean water, by taking out unutilized feed, and by constant aeration will prevent disease agents from taking a foothold and give successful results.

Mechanical failures

Power breakdowns, low voltage, poorly functioning aerators are the problems for which back-ups like generator, blower and spare aerators should be kept ready for timely use (see separate article on alarm systems, this issue).

Human errors

Hatchery work calls for disciplined, devoted, skilled and trustworthy technicians. Caution and care are needed during feeding, cleaning, change of water and handling larvae. While changing water, identical temperatures are preferred to avoid thermal shocks, although a difference of 1 to 2°C is unavoidable at times. Utmost care should also be taken to minimize stress. Slow gravitational methods for water replacement is recommended. Contamination of feed, equipment, and larvae should be avoided as much as possible. Seawater needs to be collected in advance at high tides; a few days are required for settlement and aging. Clean chlorine-free freshwater is added with seawater to produce a mixture of desired salinity much in advance. This is used for changing water in the rearing tanks to avoid osmotic stress due to salinity fluctuation.

Timely cleaning or disinfection of all equipment prior to hatchery operations will facilitate hygiene and efficient larval rearing.

Reference: RM Rao. *Hazards in hatchery management.* Training in Freshwater Prawn Farming Held at Prawn Breeding Unit Kakinada. pp. 47-49. Central Inland Fisheries Research Institute Barrackpore.