GUIDELINES FOR THE HATCHERY PRODUCTION AND CULTURE OF SPF LITOPENAEUS VANNAMEI

1.0 GUIDELINES AND SAFEGUARDS REQUIRED FOR HATCHERIES REARING SPF L. VANNAMEI

- Hatcheries duly registered under the Coastal Aquaculture Act, 2005 (CAA Act, 2005) and the Rules framed there under, would be eligible for applying for permission to import SPF L. vannamei broodstock and to produce and sell postlarvae of L. vannamei.

- Approval of the facility for rearing L. vannamei will be given by CAA, after due inspection of the facility, under the provisions of registration of hatcheries as per CAA Act, 2005.

- The hatchery facilities should have strict bio-security control as detailed below:

  ✓ The physical separation or isolation of the different production facilities is a feature of good hatchery design. In existing hatcheries with no physical separation, effective isolation may also be achieved through the construction of barriers and implementation of process and product flow controls.

  ✓ The hatchery facility should have a wall or fence around the periphery of the premises, with adequate height to prevent the entry of animals and unauthorized persons. This will help to reduce the risk of pathogen introduction by this route, as well as improve overall security.

  ✓ Entrance to the hatchery should be restricted to the personnel assigned to work exclusively in this area and a record of personnel entering the facility should be maintained by the security personnel.

  ✓ Hatchery staff should enter through a shower/dressing room, where they remove their street clothes and take a shower before entering another dressing room to put on working clothes and boots. At the end of the working shift, the sequence should be reversed.

  ✓ There should be means provided for disinfection of vehicle tyres (tyre baths at the gate), feet (footbaths containing hypochlorite solution at >50 ppm active ingredient), and hands (bottles containing iodine-PVP (20 ppm and/or 70% alcohol) to be used upon entering and exiting the unit.

  ✓ Each functional unit of the hatchery should have independent water treatment facility and it should be isolated from all other water supply systems. Separate recirculation systems may be used for each functional unit of hatchery to reduce water usage and improve bio-security, especially in high-risk areas.

  ✓ Water for the hatchery should be filtered and treated to prevent the entry of vectors and pathogens that may be present in the source water. This may be achieved by initial filtering through sub-sand well points, sand filters (gravity or pressure), or mesh bag filters into the first reservoir or settling tank. Following primary disinfection by chlorination, and after settlement,
the water should be filtered again with a finer filter and then disinfected using ultraviolet light (UV) and/or ozone.

- The water supply system may include use of activated carbon filters, the addition of ethylene diamine tetra acetic acid (EDTA) and temperature and salinity regulation.

- The discharged water from the hatchery, should be held temporarily and treated with hypochlorite solution (>20 ppm active chlorine for not less than 60 min) or other effective disinfectant prior to discharge. This is particularly crucial where the water is to be discharged to the same location as the abstraction point.

- The seawater to be used in the facility must be delivered into a storage tank where it will be treated with hypochlorite solution (20 ppm active ingredient for not less than 30 minutes) followed by sodium thiosulfate (1 ppm for every ppm of residual chlorine) and strong aeration.

- Used containers and hoses must be washed and disinfected with hypochlorite solution (20 ppm) before further use.

- Each broodstock holding tank should have a separate set of implements which must be clearly marked and placed near the tanks. Facilities for disinfection of all the implements at the end of each day’s use should be available.

- No waste water shall be released out of the hatchery without chlorination and dechlorination, especially to prevent the escape of the larvae into the natural waters. Effluent Treatment System (ETS) should be designed to include this provision.

- Only SPF broodstock cleared through the quarantine should be used in the hatchery for seed production.

- Use of pond-reared broodstock is strictly prohibited.

- Hatcheries involved in L. vannamei seed production should not use any other species within the hatchery premises.

- Nauplii should not be sold to other hatcheries. Only tested and certified post larvae (PL) should be sold.

- PL should be sold only to the farmers who have registered with the Coastal Aquaculture Authority (CAA) specifically for the culture of L. vannamei. A copy of the Certificate of Registration issued by CAA should be retained by the hatchery operator for inspection.
Detailed record of the seed production as well as sale including the name and address of the buyer/farmer should be maintained.

Any disease outbreak in the hatchery should be reported immediately to CAA.

CAA authorized personnel shall visit periodically to check the status of the broodstock, the seed production and sale.

The hatcheries should maintain a record of the imported broodstock with details of source, quantity imported, the number of mortality, eggs produced, nauplii produced, PL produced, PL sold, name and address of the farmer to whom sold, Date and No. of the registration and permission certificate issued by CAA and should report these in their quarterly compliance reports to be submitted to CAA as per the format given in Annexure-I

2.0 Bank Guarantee

The approved hatcheries will deposit a bank guarantee for Rs. 5 lakh in favour of the CAA to ensure compliance of the guidelines by them In the event of any violation the Bank Guarantee shall be invoked in addition to any other penalty the CAA may impose.
Annexure -I

Format for Quarterly Compliance Report from Hatcheries

The report should contain the following information

1. Name and Address
2. Date and No. of certificate of registration and permission to import
3. Number of broodstock imported, males and females
4. Transport mortality
5. Quarantine mortality
6. Total number of spawnings
7. Total number of eggs produced
8. Total number of nauplii produced
9. Total number of post larvae (PL) produced
10. Report on general aquatic health monitoring and any unusual mortality
11. Total number of post larvae (PL) sold to the farmers
12. Details of the farmers to whom sold (should include information on the name, address, Registration No. and copy of the permission letter for culturing L. vannamei issued by CAA

Place :
Date :

Signature

Name of the Authorized Signatory