



**COASTAL AQUACULTURE AUTHORITY**  
**Ministry of Agriculture**  
**Government of India**  
**2<sup>nd</sup> Floor, Shastri Bhawan Annexe, 26, Haddows Road,**  
**Chennai – 600 006, INDIA**  
**Tel. No.: 91 44 2821 3785**  
**Fax No.: 91 44 2821 6552**  
Website: [www.caa.gov.in](http://www.caa.gov.in)  
E-mail: [aquaauth@vsnl.net](mailto:aquaauth@vsnl.net), [aquvaauth@bsnl.in](mailto:aquvaauth@bsnl.in)

### **CULTURE OF SPF *L. VANNAMEI* BY SHRIMP FARMERS**

#### **Do's and Don'ts**

- (1) The farm should have been registered with the Coastal Aquaculture Authority (CAA).
- (2) Permission of CAA to take up SPF *L. vannamei* culture should have been obtained.
- (3) Bio-security requirements include:
  - (a) Farm to be fenced (including crab fencing)
  - (b) Provide reservoirs for water intake
  - (c) Provide bird scares/bird netting
  - (d) Separate implements for each pond
- (4) Should employ trained/experienced personnel in management of bio-security measures
- (5) Irrespective of size, farms should have an Effluent Treatment System (ETS) to handle wastewater during harvest and harvesting should be sequential, depending on the size of ETS.
- (6) Quality of wastewater should conform to the standards prescribed by CAA (Table 1). Wastewater to be retained at least for two days and should be chlorinated and de-chlorinated before release into drainage system. Water exchange should be avoided, if possible.

**Table 1.****Wastewater Standards at final discharge point from the aquaculture farms, hatcheries, feed mills and processing units**

Sl. No.	Parameters	Final discharge point	
		Coastal Marine Waters	Creek or estuarine courses when the same inland water courses are used as water source and disposal point
(1)	pH	6.0 – 8.5	6.0 – 8.5
(2)	Suspended solids mg/1	100	100
(3)	Dissolved oxygen mg/1	Not less than 3	Not less than 3
(4)	Free Ammonia (as NH <sub>3</sub> -N) mg/1	1.0	0.5
(5)	Biochemical Oxygen Demand-BOD (5 days @ 20 c) Max mg/1	50	20
(6)	Chemical Oxygen Demand-COD mg/1 Max	100	75
(7)	Dissolved Phosphate (as P) mg/1 Max	0.4	0.2
(8)	Total Nitrogen (as N) mg/1	2.0	2.0

- (7) Do not culture SPF *L. vannamei* if neighbouring farms culture native species of shrimp, crab, etc.
- (8) Only tested and certified seed produced by CAA authorized hatcheries should be used. Keep record of the name and address of hatchery, number and date of registration of hatchery and date and quantity of seed procured. PL for stocking should be selected using standard morphological and health check.
- (9) Record the quantity of shrimp produced and sold and name and address of the processor to whom sold and report it to CAA in the prescribed proforma.
- (10) Use only pelleted feed manufactured by reputed companies meant for SPF *L. vannamei* in the prescribed quantity to minimize feed wastage. When necessary, reasonable reduction in feeding must be performed in order to improve the water quality. No banned chemicals/antibiotics (Table 2) should be used in the feed or in any other form.

**Table 2.****List of Antibiotics and other pharmacologically active substances banned for using in shrimp aquaculture**

Sl. No.	Antibiotics and other Pharmacologically Active Substances
(1)	Chloramphenicol
(2)	Nitrofurans including: Furaltadone, Furazolidone, Furfurylamide, Nifuratel, Nifuroxime, Nifurprazine, Nitrofurantoin, Nitrofurazone
(3)	Neomycin
(4)	Nalidixic acid
(5)	Sulphamethoxazole
(6)	Aristolochia spp and preparations thereof
(7)	Chloroform
(8)	Chlorpromazine
(9)	Colchicine
(10)	Dapsone
(11)	Dimetridazole
(12)	Metronidazole
(13)	Ronidazole
(14)	Ipronidazole
(15)	Other nitroimidazoles
(16)	Clenbuterol
(17)	Diethylstilbestrol (DES)
(18)	Sulfonamide drugs (except approved Sulfadimethoxine, Sulfabromomethazine and Sulfaethoxyypyridazine)
(19)	Fluroquinolones
(20)	Glycopeptides

- (11) Depth of the ponds should be maintained at a level not less than 1.5 m.
- (12) If the stocking density exceeds 5 pieces/sq. m. aerators may be used to keep up the level of oxygen requirement. Dissolved oxygen content of pond water should be maintained above optimum (above 5 mg./l) throughout the culture period.
- (13) Disinfecting protocol for personnel and implements should be strictly adhered to.
- (14) Shrimp health and amount of bacteria (vibrios) in water column and water quality should be routinely monitored.
- (15) Water quality parameters such as pH, alkalinity, dissolved oxygen, total ammonia, unionised ammonia, nitrite, nitrate, total nitrogen, phosphorus BOD and COD should be routinely monitored.

- (16) Outbreak of disease should be reported immediately and must be treated and contained within the pond in order to prevent spread of disease.
- (17) Area surrounding the farm should be kept clean from garbage and other farm wastes.
- (18) Storage for feed and farm equipments should be in good condition and kept away from any potential carrier animals.
- (19) Harvesting should be planned in advance and proper care should be taken for icing the product immediately to maintain product freshness and sanitation.
- (20) Record of farm management practices including feeding, water quality, chemical use and disease treatment, therapeutic agent, etc. should be maintained as a routine practice to provide up-to-date information to the Coastal Aquaculture Authority, Chennai.

\*\*\*\*\*